A Division of Systems, Inc.

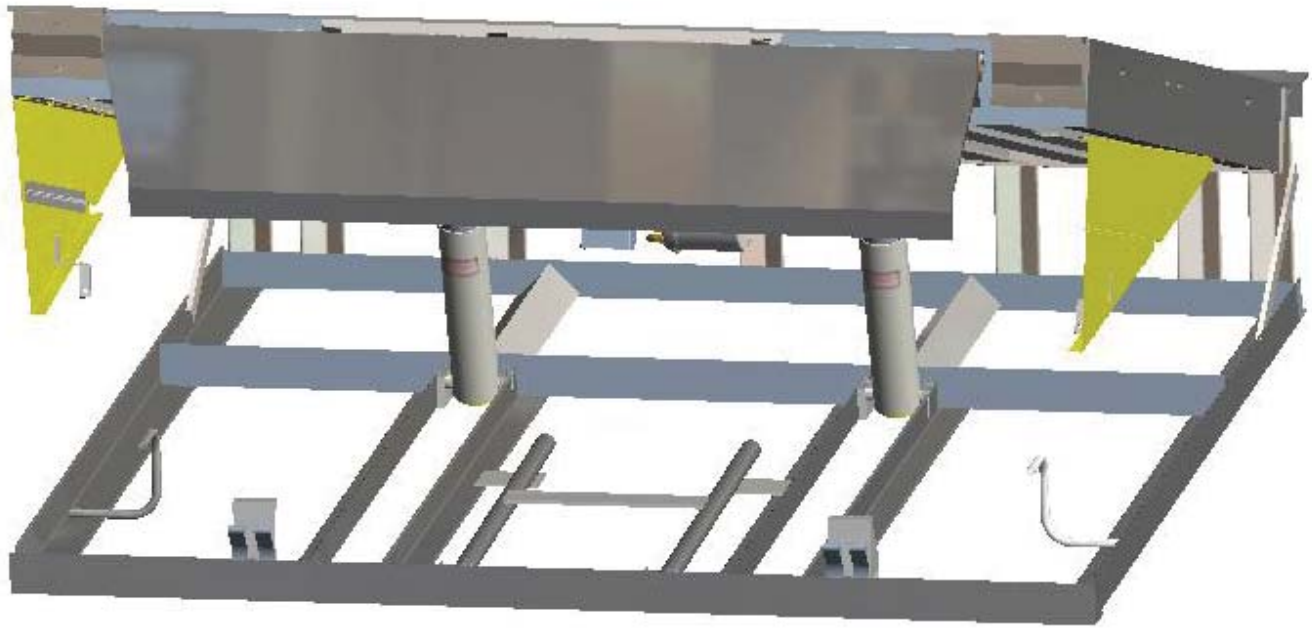
POWERAMP®

Premium Loading Dock Systems

XL SERIES

Dock Leveler

Owner's/User's Manual



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Recognize Safety Information

Safety - Alert Symbol

The Safety-Alert Symbol identifies import safety messages on equipment, safety signs, in manuals, or elsewhere. When you see this symbol, be alert to the possibility of personal injury of death. Follow the instructions in the safety message.

DANGER

The use of the word DANGER signifies the presence of an extreme hazard or unsafe practice which will most likely result in severe injury or death.

WARNING

The use of the word WARNING signifies the presence of a serious hazard or unsafe practice which may result in serious injury or death.

CAUTION

The use of the word CAUTION signifies possible hazard or unsafe practice which could result in personal injury.

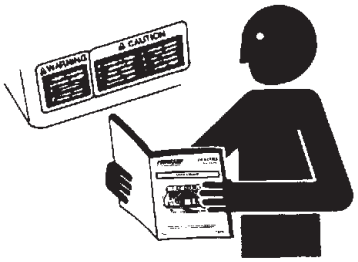
NOTICE

The use of the word NOTICE is to draw attention to a procedure that needs to be followed to prevent machine damage.

SAFETY INSTRUCTIONS

Indicates a type of safety sign, or separate panel on a safety sign, where safety-related instructions or procedures as described.

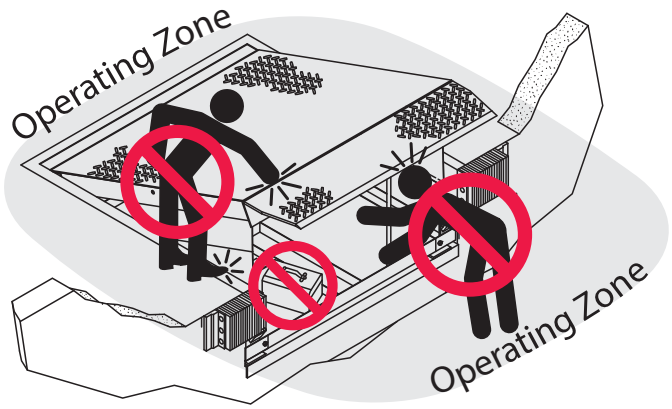
General Operational Safety Precautions



Read and understand the Owners's/Users's manual and become thoroughly familiar with the equipment and its controls before operating the dock leveler.

Never operate a dock leveler while a safety device or guard is removed or disconnected.

Never remove DANGER, WARNING, or CAUTION signs, decals or placards on the equipment unless replacing them.



Do not start the equipment until all unauthorized personnel in the area have been warned and have moved outside the operating zone.

Remove any tools or foreign objects from the operating zone before starting.

Keep the operating zone free of obstacles that could cause a person to trip or fall.

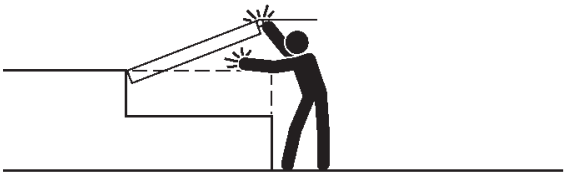
Operational Safety Precautions

Learn the safe way to operate this equipment. Read and understand the manufacturer's instructions. If you have any questions, ask your supervisor.

DANGER

Stay clear of dock leveling device when transport vehicle is entering or leaving area.

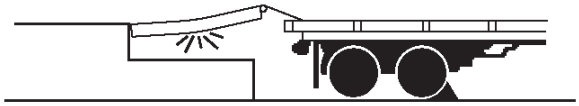
Do not move or use the dock leveling device if anyone is under or in front of it.



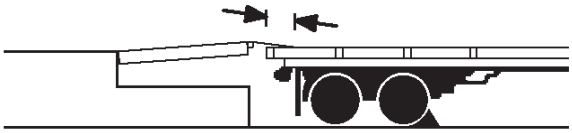
Keep hands and feet clear of pinch points. Avoid putting any part of your body near moving parts.

WARNING

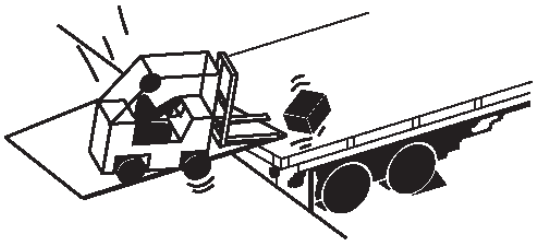
Chock/restrain all transport vehicles, Never remove the wheel chocks until loading or unloading is finished and transport driver has been given permission to drive away.



Do not use a broken or damage dock leveling device. Make sure proper service and maintenance procedures have been performed before using.

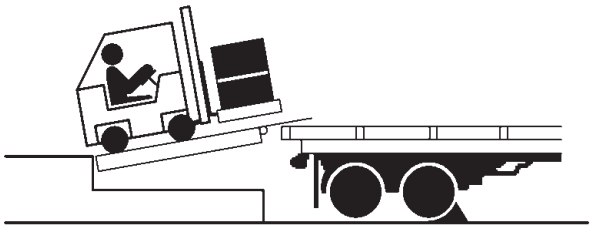


Make sure lip overlaps onto transport vehicle bed at least 4 in. (102 mm).

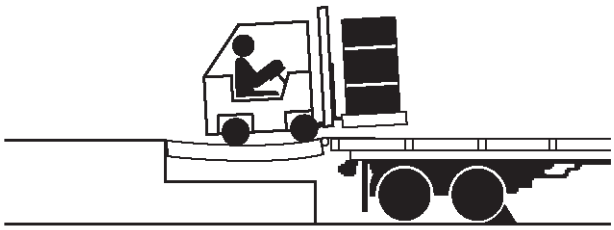


Keep a safe distance from both side edges.

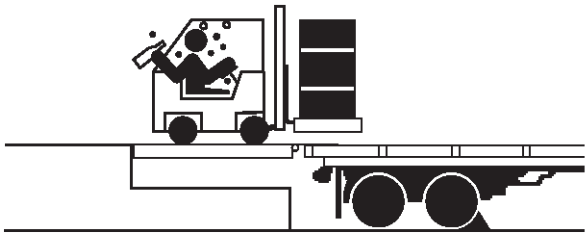
⚠WARNING



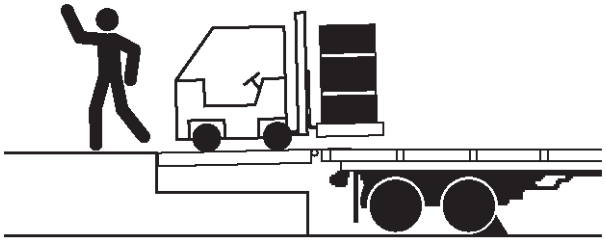
Do not use dock leveling device if transport vehicles bed is too high or too low.



Do not overload the dock leveling device.



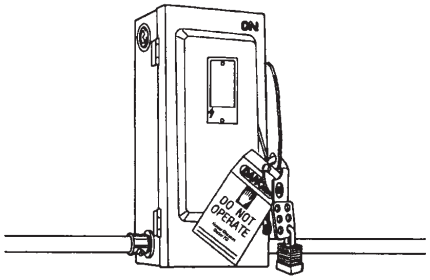
Do not operate any equipment while under the influence of alcohol or drugs.



Do not leave equipment or material unattended on dock leveling device.

Maintenance Safety Precautions

DANGER

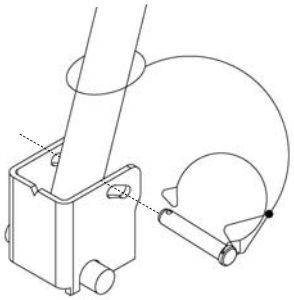


Hydraulic and electrical power must be OFF when servicing the equipment. For maximum protection, use an OSHA approved locking device to lock out all power sources. Only the person servicing the equipment should have the key to unlock the device.

CAUTION

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the unit before maintenance is complete.

DANGER



A maintenance prop permanently attached and hinged to the unit with means for lock out/tag out requirements (per OSHA 1910.147) is included with each pit style dock leveler. In addition, it is recommended and good safety practice to use an additional means to support the dock platform and lip anytime when physically working in front of or under the dock leveler. This additional means may include, but not limited to a boom truck, fork truck, stabilizing bar or equivalent.

WARNING

ALWAYS disconnect electrical power source and ground wire before welding on dock leveler.

DO NOT ground welding equipment to any hydraulic or electrical components of the dock leveler. Always ground to the dock leveler frame.

Failure to follow these instructions may result in damage to dock leveler and/or serious personal injury or death.

WARNING

DO NOT grind or weld if hydraulic fluid or other flammable liquid is present on the surface to be ground or welded

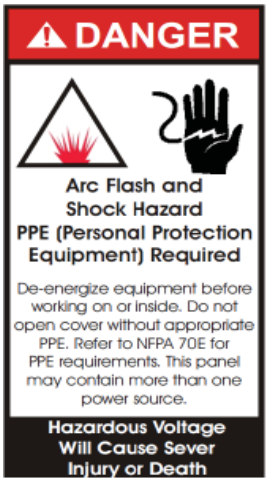
DO NOT grind or weld if uncontained hydraulic fluid or other flammable liquid is present. Stray sparks can ignite spills or leaks near the work area. Always clean up the oil leaks and spills before proceeding with grinding or welding.

Always keep a fire extinguisher of the proper type nearby when grinding or welding.

Failure to follow these instructions may result in serious personal injury or death.

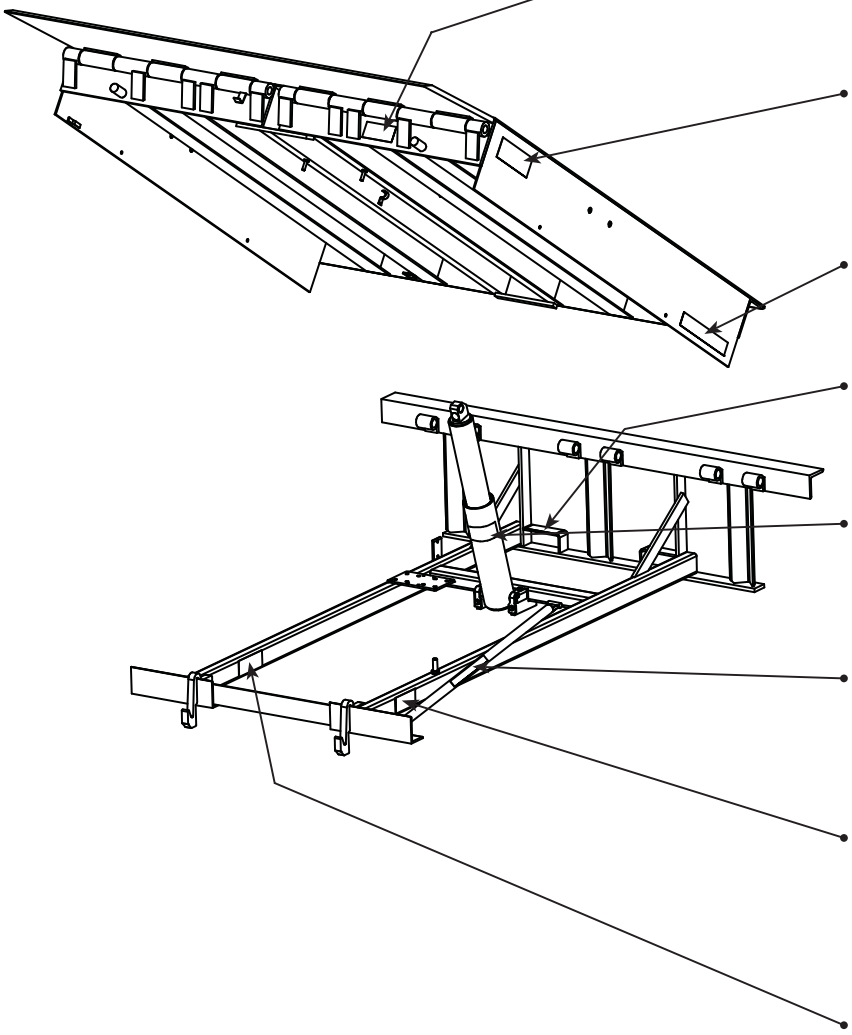
WARNING

ALWAYS stand clear of dock leveler lip when working in front of the dock leveler. Failure to do this may result in serious personal injury or death.

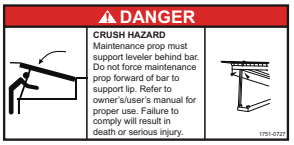

DANGER
Arc Flash and
Shock Hazard
PPE (Personal Protection
Equipment) Required
De-energize equipment before working on or inside. Do not open cover without appropriate PPE. Refer to NFPA 70E for PPE requirements. This panel may contain more than one power source.
Hazardous Voltage
Will Cause Sever
Injury or Death

Safety Decals

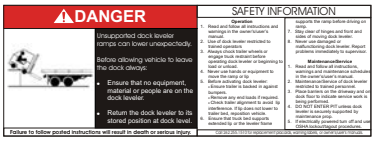
Every 90 days (quarterly) inspect all safety labels and tags to ensure they are on the dock leveler and are easily legible. If any are missing or require replacement, please call 1-800-643-5424 for replacements.



1751-0727


DANGER
CRUSH HAZARD
Maintenance prop must support leveler behind bar. Do not force maintenance prop forward of bar to support lip. Refer to owner's/user's manual for proper use. Failure to comply will result in death or serious injury.
1751-0727

1751-0730 (x2)


DANGER
Unsupported dock leveler ramps can lower unexpectedly.
Before allowing vehicle to leave the dock always:
Failure to follow posted instructions will result in death or serious injury.
SAFETY INFORMATION

(decal placed in same position on both sides)

1751-0329 (x2)

(decal placed in same position on both sides)

1751-0330 (x2)

(decal placed in same position on both sides)

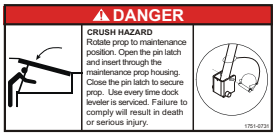
1751-0138

DANGER
CRUSH HAZARD
DO NOT REMOVE hydraulic cylinder until leveler is safely supported by maintenance prop. Refer to owner's/user's manual for proper maintenance procedure. Failure to comply will result in death or serious injury.

1751-0729

DANGER
CRUSH HAZARD
Do not work under dock leveler unless this maintenance prop has been secured in the upright position. See owner's/user's manual for proper procedures. Failure to comply will result in death or serious injury.
1751-0729

1751-0731


DANGER
CRUSH HAZARD
Rotate prop to maintenance position. Open the pin latch and insert through the maintenance prop housing. Close the pin latch to secure prop. Use every time dock leveler is serviced. Failure to comply will result in death or serious injury.
1751-0731

1751-0726

DANGER
CRUSH HAZARD
DO NOT ENTER PIT unless dock leveler is safely supported by maintenance prop. Place barriers on driveway and dock floor to indicate service work being performed. Refer to owner's/user's manual for proper maintenance procedures. Failure to comply will result in death or serious injury.

OWNER'S/USER'S RESPONSIBILITIES

1. The owner/ user should recognize the inherent dangers of the interface between the loading dock and the transportation vehicle. The owner/ user should, therefore, train and instruct all operators in the safe operation and use of the loading dock equipment in accordance with manufacturer's recommendations and industry standards. Effective operator training should also focus on the owner's/user's company policies and operating conditions. Maintaining, updating and re training all operators on safe working habits and operation of the equipment, regardless of previous experience, should be done on a regular basis and should include an understanding and familiarity with all functions of the equipment. Owner's/user's shall actively maintain, update and retrain all operators on safe working habits and operations of the equipment.

2. The manufacturer shall provide to the initial purchaser all necessary information regarding Safety Information, Operation, Installation and Safety Precautions, Recommended Initial and Periodic Inspections Procedures, Planned Maintenance Schedule, Product Specifications, Troubleshooting Guide, Parts Break Down, Warranty Information, and Manufacturers Contact Information, as well as tables to identify the grade(slope) for all variations of length or configuration of the dock leveling device and information identifying the maximum uncontrolled drop encountered when sudden removal of support while in the working range of the equipment.

3. It is recommended that when the transportation vehicle is positioned correctly in the dock opening and in contact with both bumpers, there shall be a minimum of 4.00 inches (100mm) overlap of the leveling device and the transportation vehicle at all times during the loading and unloading process.

4. The Owner/User must review all name plates, placards, decals, instructions and posted warnings and place the same in view of the operator or maintenance personnel for whom such warnings are intended for. Contact manufacturer for any replacements.

5. Manufacturer's recommended periodic maintenance and inspection procedures in effect at the date of shipment shall be followed at all times. Written documentation of maintenance, replacement parts or damage should be retained. In the event of damage notification to the manufacturer is required.

6. Loading dock equipment that has been structurally damaged or has experienced a sudden loss of main support while under load (such as what might occur when a transport vehicle pulls out from under the leveling device) shall be removed from service, inspected by a manufacturer's authorized representative, and repaired or replaced as needed before being placed back in service.

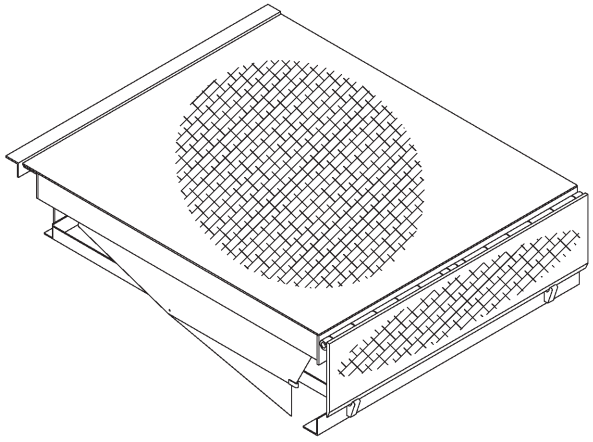
7. Any modifications or alterations of loading dock equipment shall only be done with prior written approval from the manufacturer and the same shall be at least as safe as the original equipment was prior to the modification and shall also satisfy all safety requirements of the manufacturer for the particular application of the leveling device.

8. When industrial moving devices are being used in the loading or unloading of product from the transportation vehicle, this vehicle shall have the brakes and wheel chocks applied appropriately or all other positive restraining device shall be fully utilized. It is recommended that trailers with air-ride suspension systems shall have its air exhausted prior to performing loading and unloading operation to minimize trailer bed drop.

9. Loading dock safety equipment should never be used outside of its intended use, vertical working range, or capacity. Please consult the manufacturer if you have any questions as to the use, vertical working range or capacity of the equipment. Only properly trained and authorized personnel should operate the equipment.

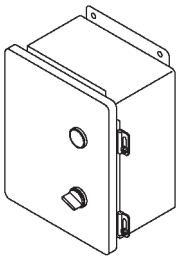
10. When selecting loading dock safety equipment, it is important to consider not only present requirements but also future plans and any possible adverse conditions, environmental factors or usage.

General Information



Congratulations on your choice of a Poweramp dock leveler. This manual covers the XL series hydraulic dock leveler.

Designed by Poweramp to be a marvel of simplicity and efficiency, your dock leveler, when properly installed, will provide many years of trouble-free performance with an absolute minimum of maintenance. Its revolutionary hydraulic system efficiently controls and operates every function. To obtain maximum performance and longest possible use, a simple program of preventive maintenance is recommended.



The PR series dock leveler comes equipped with an electrical control panel, which allows push button operation of the dock leveler functions. Each PR dock leveler unit and control panel has been factory prewired and tested to ensure satisfactory operation.

To illustrate which connections are to be made in the field at installation, electrical drawings are included with each order or by contacting Technical Services.

Once again, thank you and congratulations on your purchase of a Poweramp hydraulic dock leveler.

Dock Leveler Stock Specifications

XL dock levelers are available in the following sizes, weight capacities, and options:

Width: XL
- 8 ft (2438 mm)
- 8-1/2 ft (2590 mm)
- 9 ft (2743 mm)

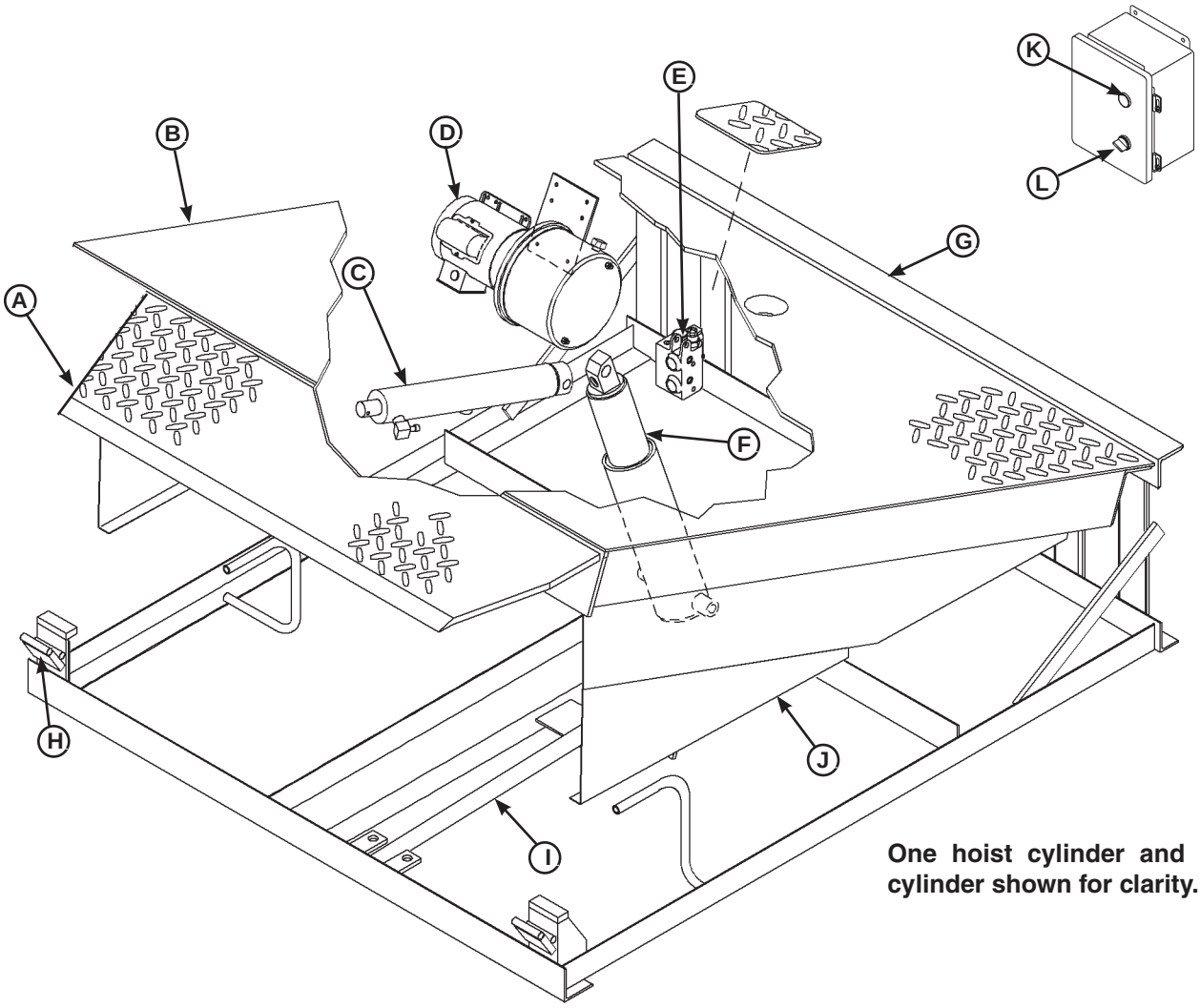
Length
- 8 ft (2438 mm)
- 10 ft (3048 mm)
- 12 ft (3658 mm)

Capacity (CIR*)
- 45,000 lb (20 411 kg)
- 50,000 lb (22 679 kg)
- 60,000 lb (27 215 kg)
- 80,000 lb (36 287 kg)

* CIR (Comparative Industry Rating)

Call Poweramp to discuss available voltages, phases and options to meet your specific needs.

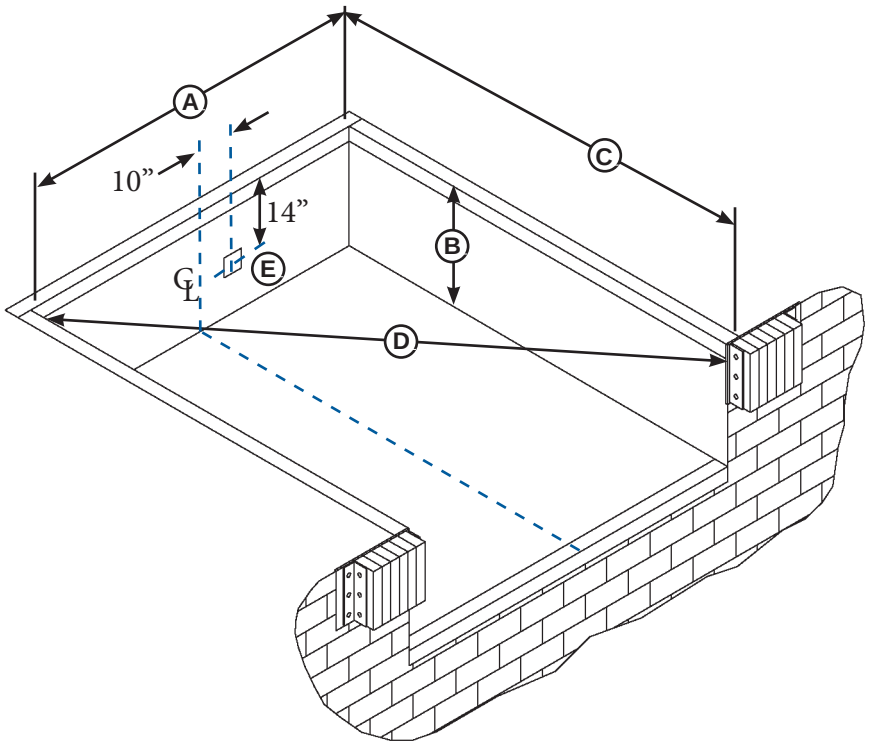
Component Identification



One hoist cylinder and lip cylinder shown for clarity.

A — Lip
B — Platform
C — Lip Cylinder(s)*
D — Powerpack (Motor/Pump/Reservoir)
E — Logic Block
F — Platform Cylinder(s)*
G — Main Frame
H — Lip Keepers (4 used)
I — Maintenance Prop
J —Toe Guard (2 used)
K —Raise Button
L —ARTD Switch (option)

Prepare Pit



A—Distance (Pit Width) (Front and Rear) **B— Distance (Dock Floor-to-Pit Floor) (All Four Corners)** **C— Distance (Pit Length) (Both Sides of Pit)** **D— Distance (Pit Corner-to-Corner) (Top, Bottom, and Both Sides)**

⚠WARNING

Post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before installation has been completed.

Failure to follow the installation instructions can result in damage to dock leveler, the facilities, and/or serious personal injury or death.

⚠CAUTION

Only trained installation professionals with the proper equipment should install this product.

NOTICE

DO NOT remove the shipping bands around the dock leveler lip until instructed to do so.

Before lowering the dock leveler into the pit, the following must be performed:

1. Remove all debris from the pit and sweep the pit clean.

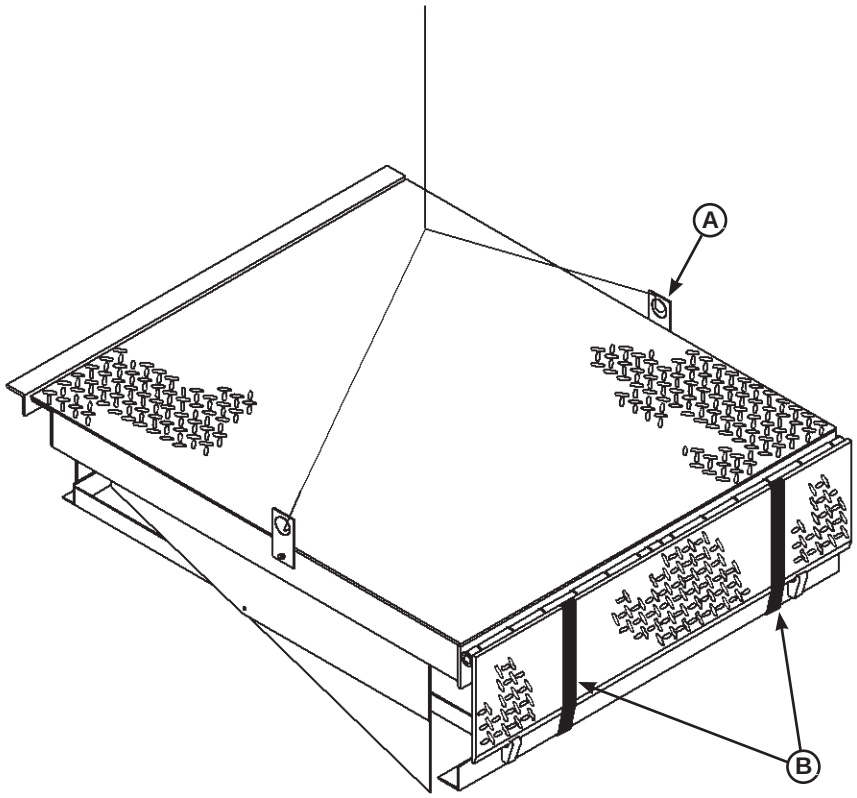
2. Check the entire dock leveler pit for proper construction according to approved/certified pit drawings. Make sure pit is square by making the following measurements:

   - Measure pit width distance (A) at both front and rear of pit.
   - Measure dock floor-to-pit floor distance (B) at all four corners.
   - Measure pit length distance (C) at both sides.
   - Measure corner-to-corner (criss-cross) distance (D) at both sides. Take measurements at dock floor level and at pit floor level.

   If any measurement is off by more than 1/8 in. (3.18 mm), contact Poweramp Technical Services before proceeding.

3. Make sure the field junction box for the dock leveler (E) is at the correct location per pit diagrams.

Prepare Dock Leveler



A— Lifting Bracket (2 used)

B — Shipping Bands

⚠WARNING

The dock leveler is heavy. Use a lifting device and chains with the appropriate lifting capacity and reach.

Always use the lifting brackets provided with the unit whenever lowering or lifting a dock leveler into or out of a pit.

Failure to follow these instructions may result in damage to dock leveler and/or serious personal injury or death.

Poweramp dock levelers are designed with installation in mind. Each unit is shipped with lifting brackets (A) fastened to the platform side joists.

NOTICE

DO NOT remove the shipping bands (B) around the platform lip and leveler frame at this time. The shipping bands are needed to hold the leveler together during the installation process.

1. Remove any control panel and bumpers that may be banded to the frame of the dock leveler. DO NOT remove the shipping bands (B) around the platform lip and leveler frame at this time.

NOTICE

DO NOT overtighten the lifting bracket hardware. Overtightening can damage the weather seal, if equipped.

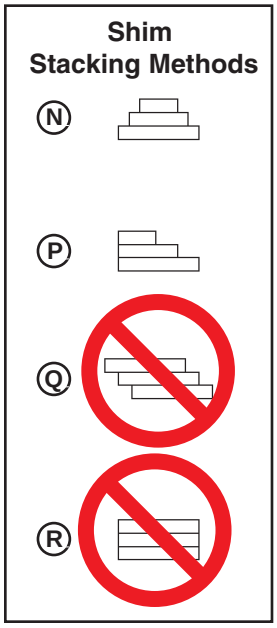
NOTE: Overall width of platform and lifting brackets (A) must be kept to a minimum to prevent interference between the lifting brackets and the pit walls as the dock leveler is lowered into the pit.

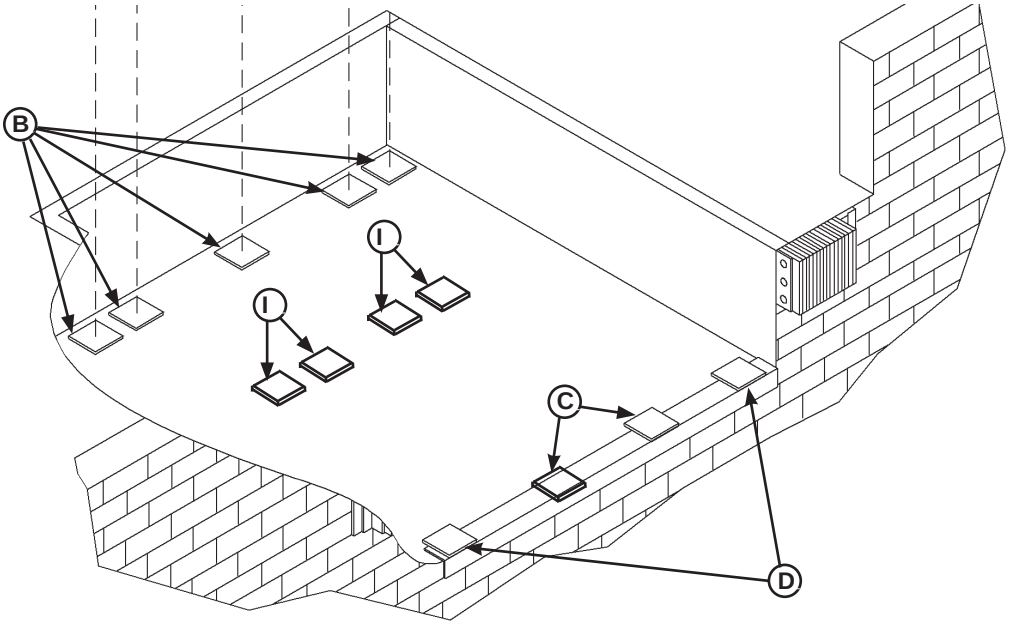
2. Make sure the mounting hardware of lifting brackets (A) is snug. The brackets should pivot relatively freely on the mounting cap screw. DO NOT overtighten.

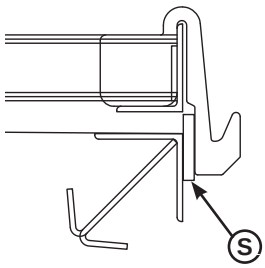
3. Attach lifting chains to lifting brackets (A) and to a lifting device (i.e., hoist or fork truck) having the appropriate lifting capacity and reach.

4. Remove wood blocks that are attached to the leveler frame before putting the dock leveler into the pit.

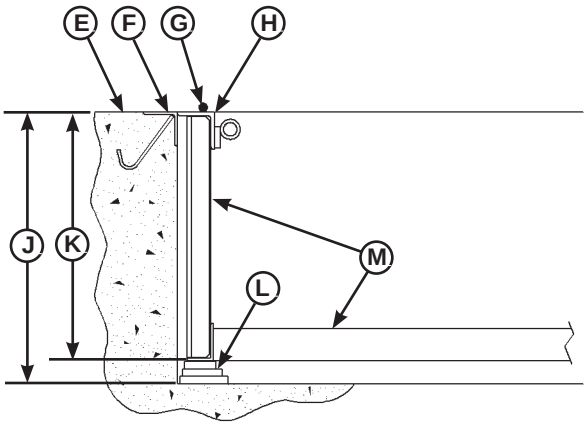
Install Dock Leveler







A— Distance (Leveler Frame Height)
B— Shim Locations (Under Rear Vertical Supports)
C— Shim Location (Under Maintenance Prop) (Standard Dock Leveler Only)
D— Shim Locations (Under Lip Keepers)
E— Dock Floor
F— Rear Pit Curb Angle
G— String
H— Rear Hinge Frame Angle
I— Shims Location(Under Hoist Cylinder)
J— Distance (Dock Floor-to-Pit Floor)
K— Distance (Top of Shim Stack-to-Dock Floor)
L— Shim Stack
M— Dock Leveler Frame
N — Pyramid (Preferred)
P— Stepped (Acceptable)
Q— Offset (Not Acceptable)
R — Straight (Not Acceptable)
S — Shim between lip keeper curb angle when required.



NOTE: Poweramp dock levelers are designed with a nominal 1/2 in. (12.7 mm) shimming distance to allow for pit inconsistencies.

1. Determine height of shim stack (L) for each shim location (B) by performing the following:

   a. Measure leveler frame height distance (A).

   b. Measure dock floor-to-pit floor distance (J) at each shim location (B). Write down the dimensions obtained at each location.

   c. Subtract distance (A) from distance (J) to obtain the shim height. Repeat for each shim location.

NOTICE

The minimum size of the shim that contacts the leveler frame (i.e., the top shim of each shim stack) must be at least 4-1/2 x 4-1/2 in. (114.3 x 114.3 mm) to support the full width of the frame rail and to provide a shelf for a fillet weld.

Use the thickest shim stock possible for stability and weld penetration purposes. DO NOT use multiple layers of 1/8 in. (3.18 mm) or thinner shim stock.

2. Using the results obtained in step 1, create the individual shim stacks on the pit floor at locations (B). Build each shim stack (L) using the pyramid method (N) (preferred) or stepped method (P) with the top shim having a minimum size of 4-1/2 x 4-1/2 in. (114.3 x 114.3 mm) and each successive lower shim being larger so the shims can be welded together using a fillet weld. DO NOT use offset method (Q) or straight method (R).

NOTE: To assist in obtaining an accurate measurement of distance (K), use a string (G) pulled tight across the pit opening, directly over the shim locations.

3. Verify that each shim stack is at the correct height by measuring distance (K) [top of shim stack (L) to dock floor]. Distance (K) must equal the dock leveler height (A).

4. For all standard models, put a 1/4 in. (6.6 mm) thick shim at locations (C and D) .

   For Clean Pit models, put a 1/4 in. (6.6 mm) thick shim at locations (D) only.

NOTE: A 1/4 in. (6.6 mm) thick shim at locations (C and D) is used only as a starting point. The final shim stack height will be determined after dock leveler is lowered into the pit.

⚠WARNING

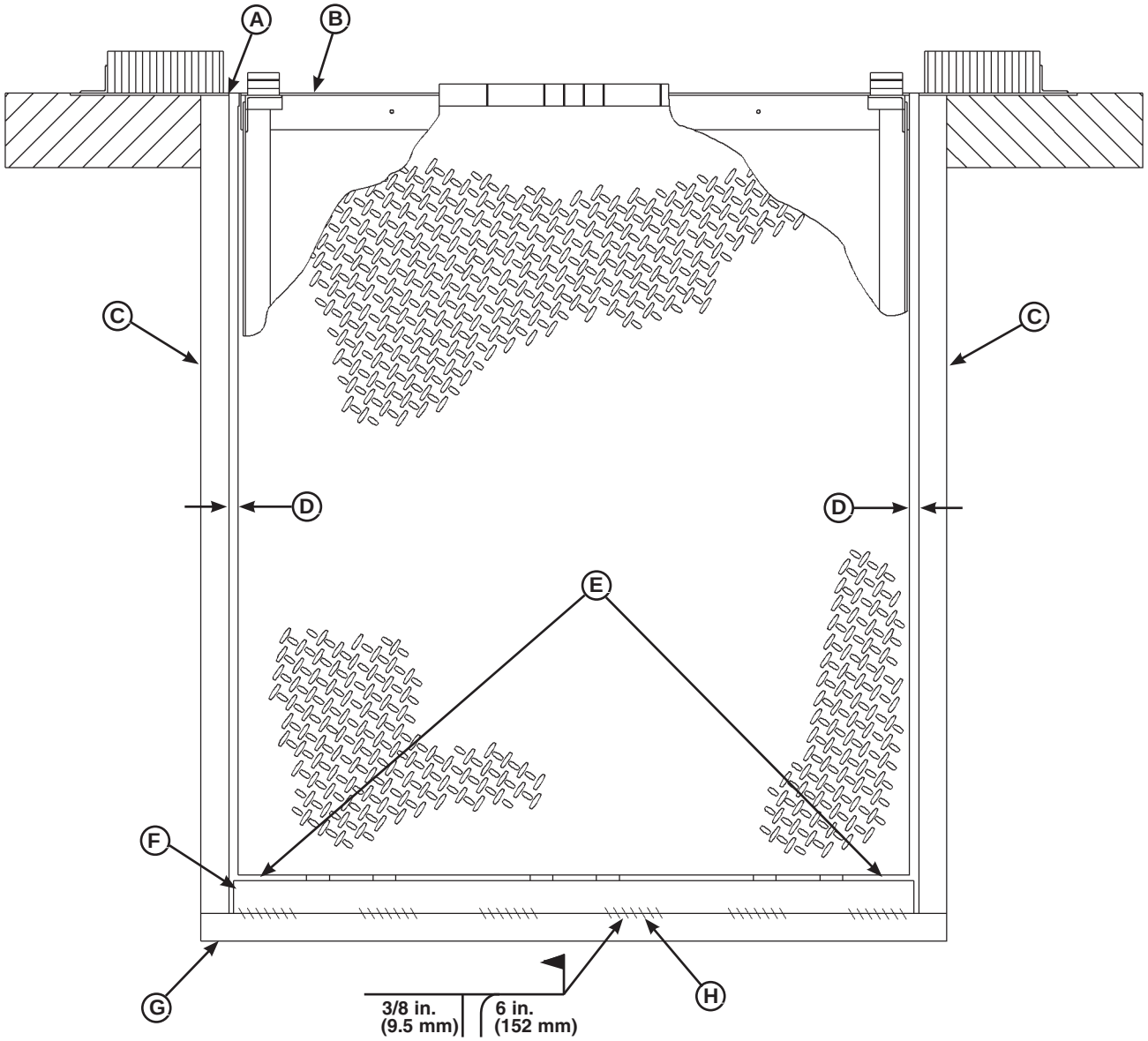
The dock leveler is heavy. Use chains and a lifting device with the appropriate lifting capacity and reach. Failure to do so may result in damage to dock leveler and/or serious personal injury or death.

5. Using an appropriate lifting device connected to the lifting brackets, lower dock leveler into the pit so rear hinge frame angle (H) is tight against rear pit curb angle (F) across full width of the leveler frame.

6. Allow rear of dock leveler to rest on the rear shims while keeping the front of the dock leveler level with the dock floor.

7. For all standard models, add shims at front shim locations (C and D) so front of dock leveler will stay level with dock floor when leveler is resting fully on shims.

   For CleanPit models, add shims only at front shim locations (D) so front of dock leveler will stay level with dock floor when leveler is resting fully on shims.



A— Front of Dock Pit
B— Dock Leveler Frame
C— Side Pit Curb Angle
D— Gap [3/4 in. (19 mm) Minimum]
E— Pry Locations
F— Rear Hinge Frame Angle
G— Rear Pit Curb Angle
H— Flare Bevel Weld, Typical (To Fit Spacing)

8. With rear hinge frame angle (F) tight against rear pit curb angle (G), perform/check the following:

   - Pry between the platform and rear hinge frame angle at locations (E) to make sure rear edge of platform is parallel to the rear hinge frame angle (F).

   - Gap (D) must exist equally along both sides of leveler so weather seal (if equipped) will not bind during dock leveler operation.

9. If gap (D) cannot be obtained equally at both sides of leveler, grind or add material at the rear edge of rear hinge frame angle (F) as needed.

10. Allow the dock leveler to rest fully on the shim stacks. Check that a smooth and level transition exists between the dock floor and the dock leveler platform. Add or remove shims as necessary until a smooth transition is obtained.

11. If leveler cannot be squared and/or made level as instructed in steps 8 — 10, contact Technical Services.

⚠WARNING

DO NOT grind or weld if hydraulic fluid or other flammable liquid is present on the surface to be ground or welded.

DO NOT grind or weld if uncontained hydraulic fluid or other flammable liquid is present. Stray sparks can ignite spills or leaks near the work area. Always clean up the oil leaks and spills before proceeding with grinding or welding.

Always keep a fire extinguisher of the proper type nearby when grinding or welding.

Failure to follow these instructions may result in serious personal injury or death.

NOTICE

DO NOT connect the dock leveler electrical wiring and ground connections until all welding has been completed.

DO NOT ground welding equipment to any hydraulic or electrical components of the dock leveler. Always ground welding equipment to the dock leveler frame, NEVER to the platform.

Failure to follow these instructions may damage the motor, hoist cylinder, wiring, and/or control panel.

NOTE: The illustration on the previous page shows a typical weld pattern. The weld pattern will vary slightly depending on size of dock leveler.

NOTICE

DO NOT weld continuously along the full length of the rear hinge frame angle. This can put unnecessary stress on the leveler components, causing the leveler to malfunction and shorten the lifespan of the affected components.

12. With the rear hinge frame angle (F) tight against the rear pit curb angle (G), weld the rear hinge frame angle (F) to the rear pit curb angle (G) using a 3/8 in. (9.5 mm) flare bevel skip weld — each weld being 6 in. (152 mm) long.

    Start at each end with a 6 in. (152 mm) long weld. Space all the other welds out evenly leaving approximately 6 in. (152 mm) space between each weld.

13. Weld front of dock leveler frame (B) to shims located under the keepers, then weld the shims to the front pit curb steel.

14. With leveler welded into place, remove the shipping bands from around lip and leveler frame.

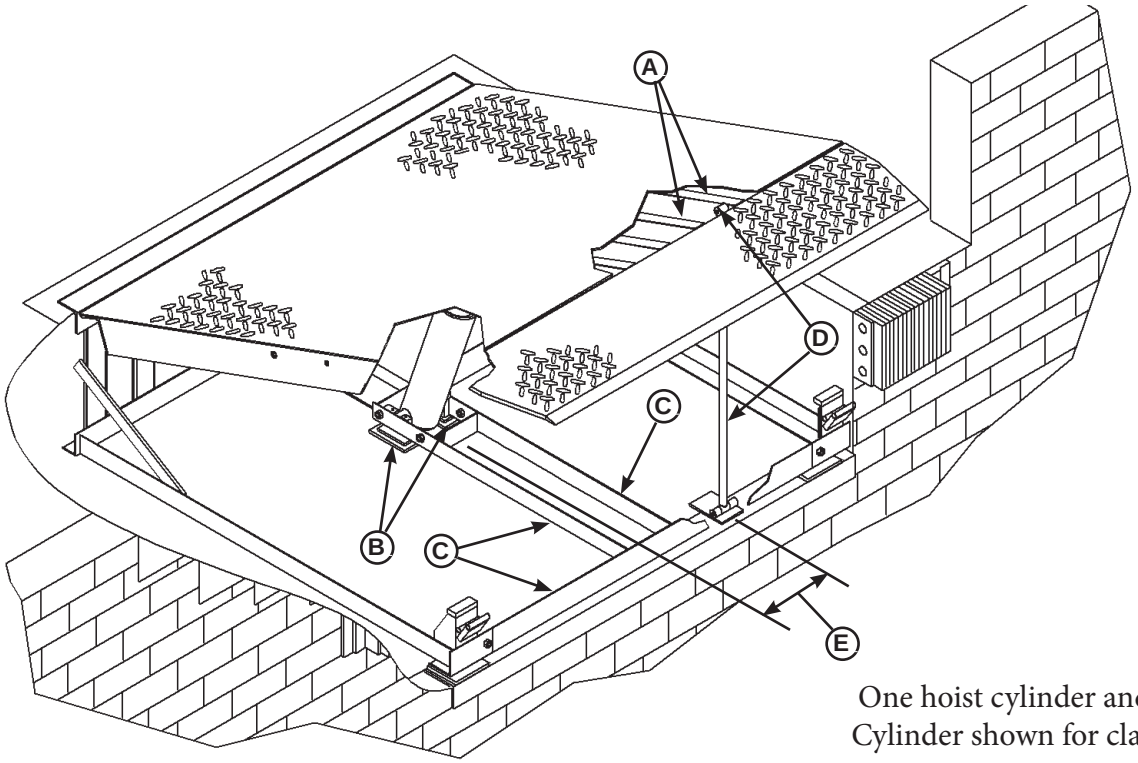
⚠WARNING

If the platform is raised using an external lifting device or the hydraulic system is opened to atmosphere, air will enter into the hydraulic system.

Whenever this happens, always cycle the leveler at least 4 times using the leveler's own hydraulic power system before allowing the leveler to be put into service. This is to make sure all air is purged from the hydraulic cylinders. Failure to do this may result in serious personal injury or death.

15. Using an external lifting device (i.e., crane or fork truck) attached to the platform lifting brackets, slowly raise the platform. Check for binding as platform is being raised.

16. If binding occurs, lower the platform. Reposition leveler and/or add or remove shims as necessary. Slowly raise platform again. If platform still binds, contact Technical Services for further instructions.



One hoist cylinder and lip
Cylinder shown for clarity.

CleanPit Model Shown

A— Platform Joists
B— Shim Locations (Under Platform Cylinder Trunnions)
C— T- Frame (CleanPit Only)
D— Maintenance Prop (CleanPit Model Shown)
E— Distance [8-1/2 in. (216 mm) Approx] (Center of Leveler to Center of Prop Mounting Plate)

NOTE: For Clean Pit models, proceed to step 17.

17. Standard models only:

    a. Install shims under maintenance prop (D) where prop attaches to leveler frame. Make sure prop is solidly shimmed.

    b. Raise maintenance prop (D) to the service (upright) position and lock prop in this position using an OSHA approved locking device.

    c. Proceed to step 18.

⚠WARNING

Closely follow the step-by-step instructions for installing the CleanPit maintenance prop. Failure to install the maintenance prop correctly may result in failure of prop during use, damage to equipment, and/or serious personal injury or death.

18. Clean Pit models only:

    a. Temporarily support platform in the full raised position using an external lifting device. Provide addition support using two 4 x 4 in. (102 x 102 mm) wood beams of sufficient length, one at each side of platform. (*Use of two steel supports having sufficient strength is acceptable*.)

    b. Remove maintenance prop (D) from the shipping location on dock leveler frame.

    c. Position base of maintenance prop (D) so center of prop is approximately 8-1/2 in. (216 mm) (E) to left* of dock leveler center. Adjust position of prop base so opposite end of prop will go between the platform joists (A) when prop is fully raised. The prop must not contact the joists, wiring, or other components.

    d. Tack weld the prop base to front pit curb steel. Raise the prop to the upright position to make sure the prop does not contact a platform joist. The prop must rest against the inside corner of the lip hinge header.

    e. When proper operation of the prop is confirmed, finish weld the prop base to the front pit curb steel.

    f. Move the maintenance prop to the service (upright) position. Remove the temporary supports installed in step a of this procedure and lower the platform onto the prop using the external lifting device. Confirm the prop is properly engaged. DO NOT disconnect the external lifting device at this time.

* For left/right orientation of dock leveler, see inside back cover of this manual.

⚠WARNING

Make sure all personnel are outside of the leveler operating zone and clear of the platform lip before activating the leveler. Failure to do this may result in serious personal injury or death.

⚠WARNING

Standard models only:
DO NOT use the maintenance prop to support the raised platform until the maintenance prop has been properly shimmed and welded. The shims must be welded to each other, the leveler frame, and to the front pit curb steel. Failure to do this may result in serious personal injury or death.

19. All model levelers: Install shims at locations (B) using the pyramid or stepped shimming method. Both platform cylinder trunnions must be solidly shimmed the entire length of the trunnion. Make sure the trunnions are level from side-to-side as well as from front-to-back.

20. Finish weld all shims using a fillet weld.

    - Weld all shims within each shim stack to each other, then weld the shim stack to the leveler frame.

    - Weld the front leveler frame shim stacks to the front pit curb steel.

21. When all welding has been completed, paint all the welds and shims.

NOTE: Clean Pit models *are shipped with a T-frame (C) installed. This temporary frame holds the leveler frame at the correct dimensions until the leveler is permanently anchored into place. Only then should it be removed.*

There are six cap screws and nuts that fasten the T- frame to the rest of the leveler frame. Tack welds may also be used.

22. For CleanPit models only, remove the T-frame (C).

Install Control Panel and Wiring

⚠WARNING

The electrical power must be OFF prior to electrical installation. For maximum protection, use an OSHA approved locking device to lock out all power sources. Only the person installing the equipment should have the key to unlock the power source.

Failure to follow these instructions may result in serious personal injury or death.

⚠WARNING

DO NOT make any final electrical connections until all welding has been completed. Failure to do this may result in serious personal injury or death.

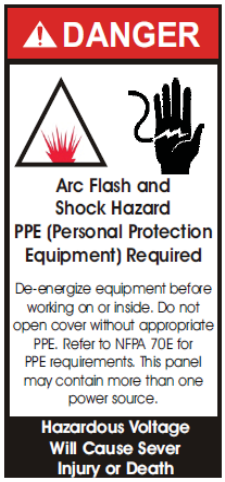
⚠CAUTION

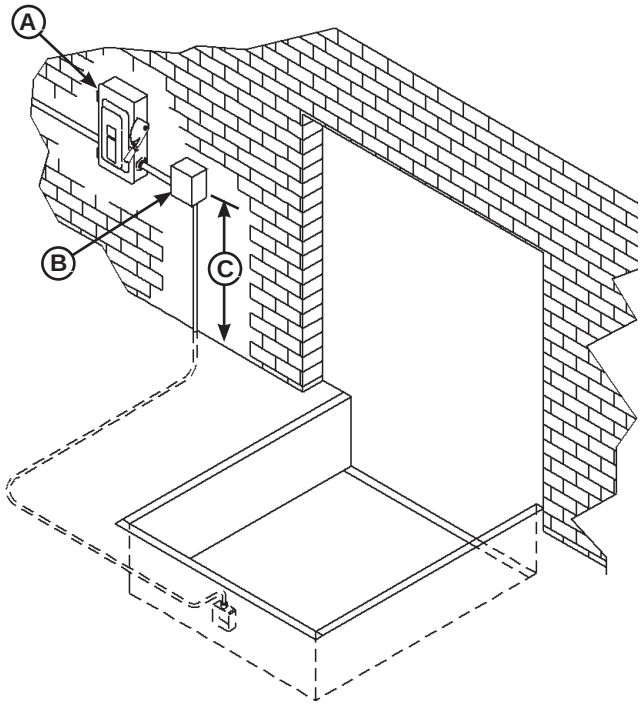
When drilling access hole in the control box, DO NOT penetrate too deep, components may be damaged.

DO NOT turn control upside down to drill any access holes. To prevent damaged to electrical components from debris cover components prior to drilling

Seal all conduit entrances to prevent moisture from entering the control box.

DO NOT use compressed air to clean control box. Recommended to vacuum debris from inside.


DANGER
Arc Flash and
Shock Hazard
PPE (Personal Protection
Equipment) Required
De-energize equipment before working on or inside. Do not open cover without appropriate PPE. Refer to NFPA 70E for PPE requirements. This panel may contain more than one power source.
Hazardous Voltage
Will Cause Sever
Injury or Death



A— Disconnect Panel (provided by others)
B— Control Panel C— Distance, 48 in. (14 630 mm)

1. Mount the pushbutton control panel (B) so bottom of control panel-to-dock floor distance (C) is 48 in. (1219.2 mm).

2. Install electrical disconnect panel (A) if not already installed.

3. Install and connect the control wiring.

4. Connect the dock leveler power cable to the field wires in the pit junction box. Refer to the electrical drawings supplied with the dock leveler.

5. After all electrical connections in the pit have been made, disengage the maintenance prop and lower the platform using the external lifting device connected to the platform lifting brackets.

⚠CAUTION

All electrical work — including the installation of the disconnect panel, control panel, and final connections to the pit junction box — must be performed by a certified electrician and conform to all local and applicable national codes.

Put New Dock Leveler Into Service

1. Disconnect the external lifting device and chains from the lifting brackets.

2. Check that the leveler is flush with the dock floor and that the platform lip contacts both lip keepers evenly.

   If an excessive transition exists between the dock floor and leveler and/or lip does not contact both lip keepers evenly, contact Poweramp Technical Services for further instructions.

3. Install the dock bumpers as required.

⚠WARNING

Always stand clear of the dock leveler lip when working in front of the dock leveler. Failure to do this may result in serious personal injury or death.

4. Turn the main electrical power ON.

5. Raise the leveler platform fully by pushing and holding the RAISE button or lightly pulling and holding the dual lanyard pull ring located in a recess at the rear of the plaltform.

NOTE: The platform of a properly operating dock leveler will automatically stop rising when it reaches approximately 2 – 3 inches from its full raised height, at which point, the lip extends. When the lip is fully extended, the platform will continue to rise until it reaches the full raised position. (If the lip does not extend or extend fully, see Platform Rises to Full Height, But Lip Does Not Fully Extend in the Troubleshooting section.)

6. Release the RAISE button (or pull ring) to lower the platform. As long as there is no truck present at the dock, the platform will lower to the full below-dock position as the lip folds.

7. *NOTE: If a truck is present, the platform will lower until the lip rests on the truck/trailer bed. (See Operating Instructions in Operation section.)*

8. When the platform lowers to the full below-dock position, wait 5 seconds after the lip has folded to allow lip cylinder to fully retract. Push and hold the RAISE button or lightly pull and hold the dual-lanyard pull ring until the platform rises just enough to clear the lip keepers, then release the RAISE button (or pull ring) to allow the platform to lower to the cross-traffic (stored) position (lip engages lip keepers).

NOTE: For dock levelers equipped with the Auto Return To Dock (ARTD), the platform will automatically return to the cross-traffic position if the ARTD is enabled. When the platform is at the full below-dock position, there is a six-second delay before the platform will automatically rise to the cross-traffic position.

9. Perform steps 5 – 7 at least four times to purge any air that may be in the hydraulic system and to ensure proper operation.

⚠CAUTION

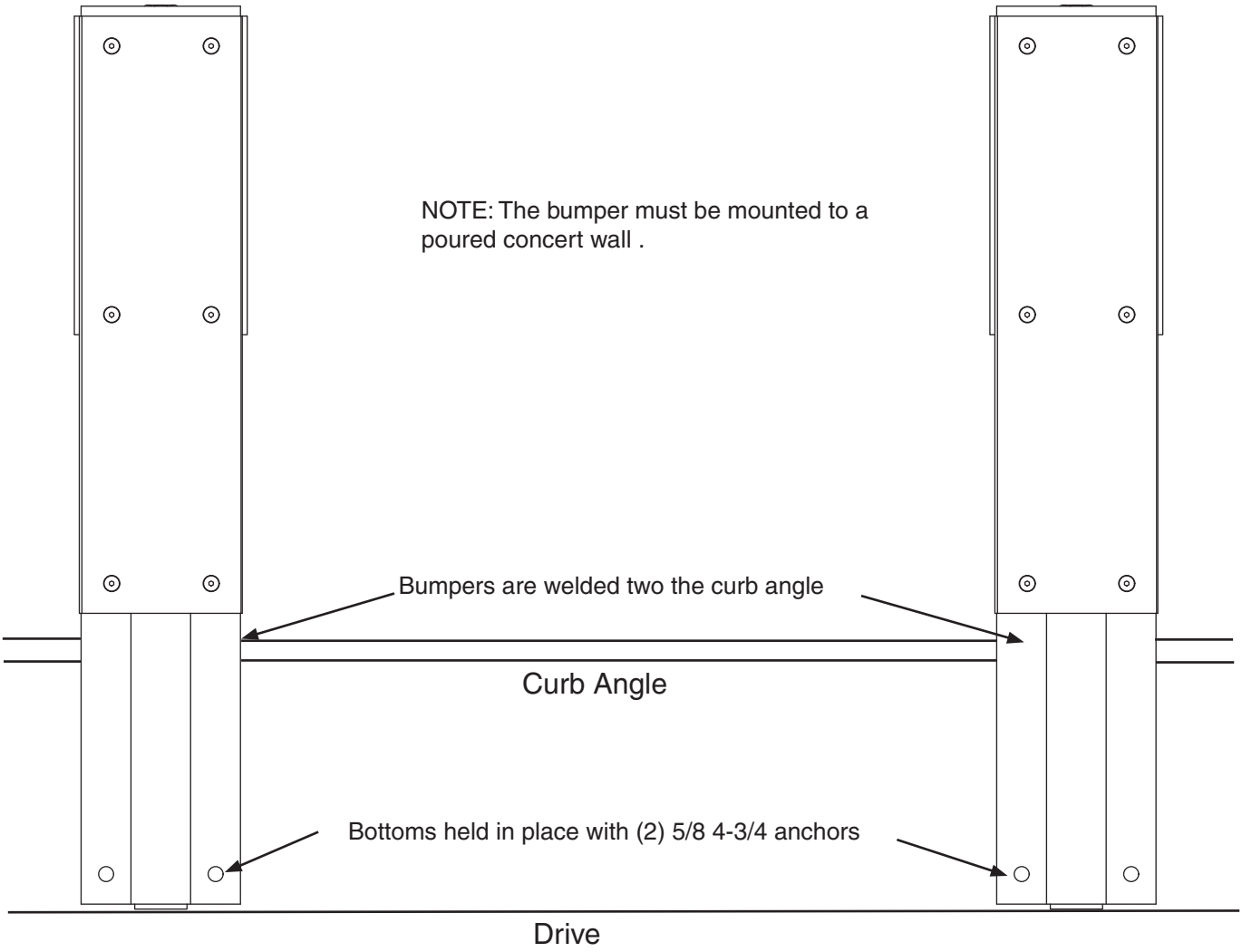
Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

10. When the platform lowers to the full below-dock position, wait 5 seconds after the lip has folded to allow lip cylinder to fully retract. Push and hold the RAISE button or lightly pull and hold the dual-lanyard pull ring until the platform rises just enough to clear the lip keepers, then release the RAISE button (or pull ring) to allow the platform to lower to the cross-traffic (stored) position (lip engages lip keepers).

NOTE: For dock levelers equipped with the Auto Return To Dock (ARTD), the platform will automatically return to the cross-traffic position if the ARTD is enabled. When the platform is at the full below-dock position, there is a six-second delay before the platform will automatically rise to the cross-traffic position.

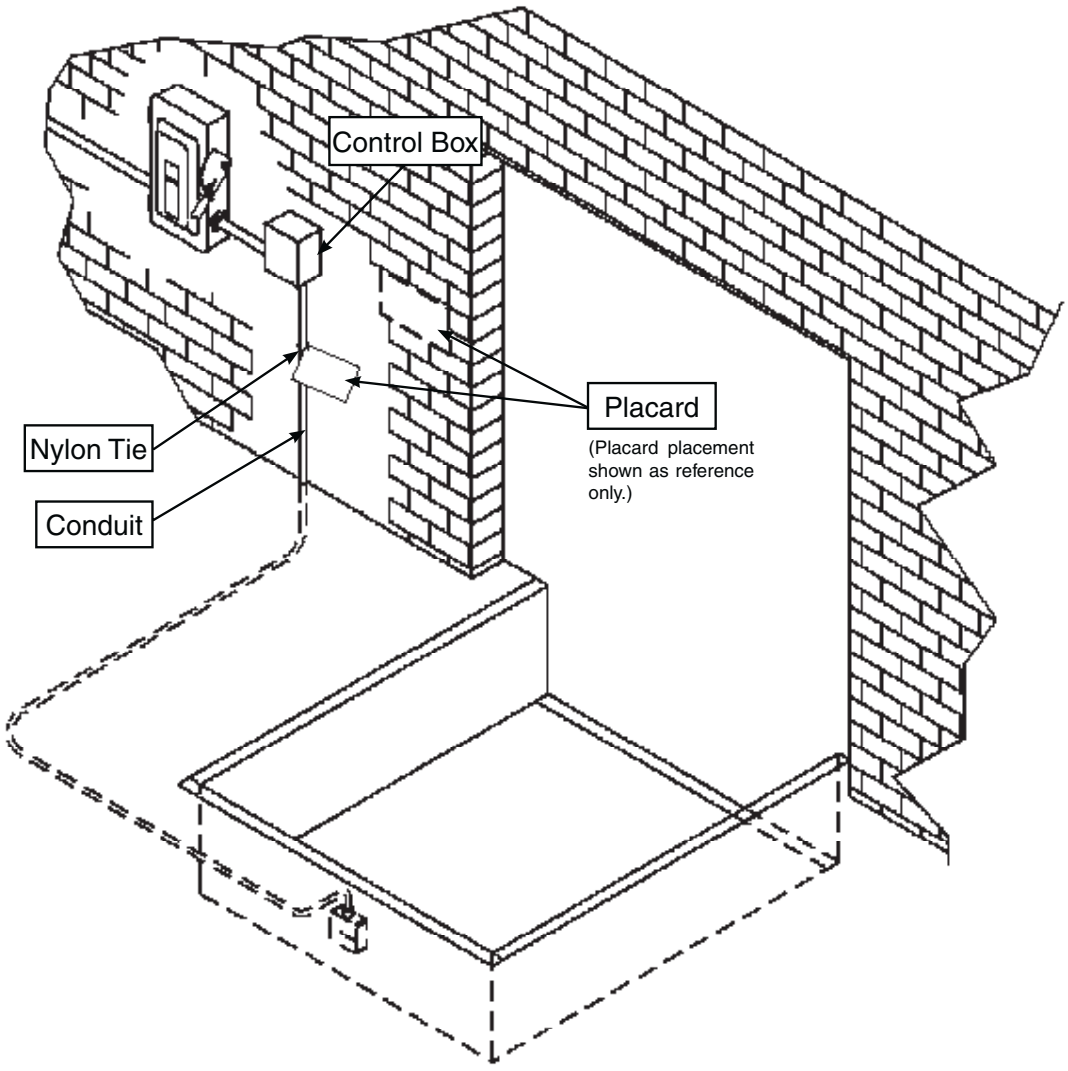
11. Perform steps 5 – 7 at least four times to purge any air that may be in the hydraulic system and to ensure proper operation.

The XL dock leveler uses spring loaded bumpers. the bumpers must be mounded in line with the bumper pads


NOTE: The bumper must be mounted to a poured concert wall .
Bumpers are welded two the curb angle
Curb Angle
Bottoms held in place with (2) 5/8 4-3/4 anchors
Drive

Placard Installation Instructions

- Owner is responsible for the installation and placement of product placards.
- Make sure placard is in plain view of dock leveler operations.
- Suggested placement of placard is near control box attached to electrical conduit by using nylon tie. If there is no control box present, mount placard on wall to the immediate left of leveler at eye level.



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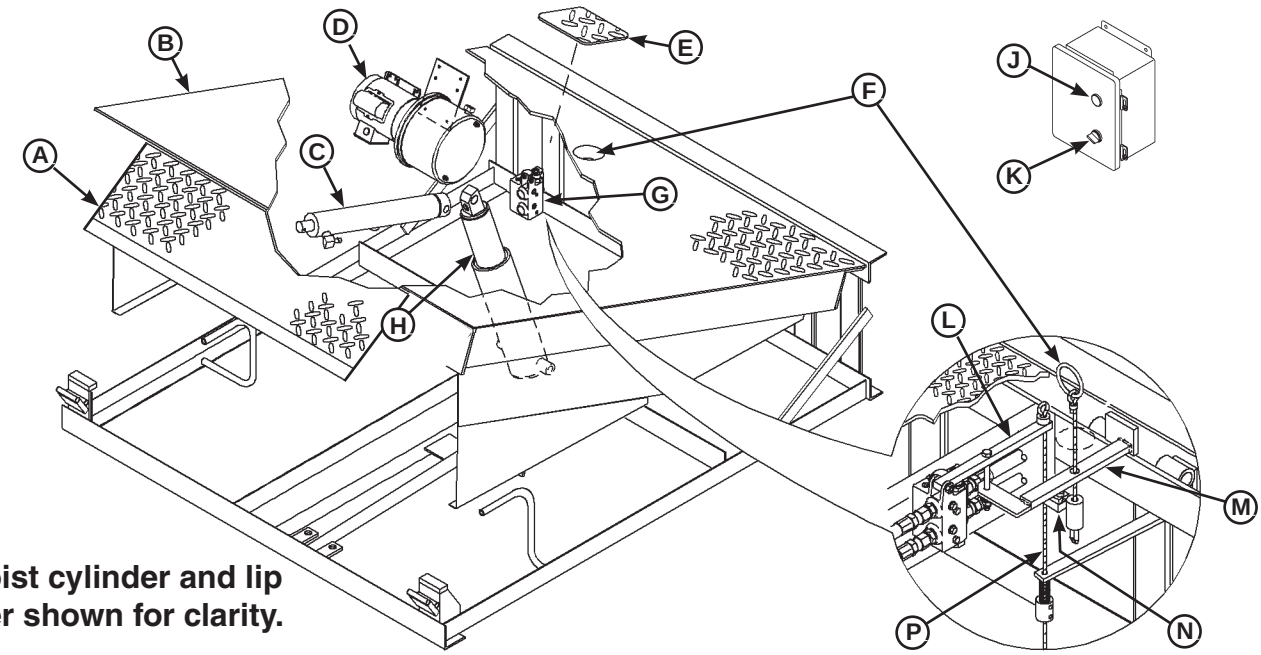
Theory



One hoist cylinder and lip Cylinder shown for clarity.

A — Lip
B — Platform
C — Lip Cylinder(s)*
D — Electric Motor
E — Inspection Plate
F — Dual-Lanyard Pull Ring
G — Logic Block
H — Platform Cylinder(s)*
J — Raise Button
K— ARTD Switch
L — Valve Lever
M — Dual Lanyard Lever
N — Dual Lanyard Switch
P — Cable

The XL dock leveler uses hydraulic logic and one-button operation for ease of use.

The dock leveler can be operated remotely using the RAISE button (J) on the control panel or operated locally using the dual-lanyard pull ring (F) located in a recess at the rear of the platform.

Platform (B) is raised by pushing and holding the RAISE button (J) or lightly pulling and holding the dual-lanyard pull ring (F). This activates an electric motor (D) which, in turn, drives a hydraulic pump. The hydraulic pump forces oil into the platform cylinder(s) (H), causing the platform to rise. Releasing the RAISE button (or pull ring) allows the platform to lower.

When the platform rises to the point where there is 1 — 3 in. (25.4 — 76.2 mm) of travel left in the platform cylinder, a cable (P) pulls valve lever (L) down. When the cable force exceeds the force necessary to shift the spool valve inside logic block (G), the spool shifts, causing oil to be redirected to the lip cylinder(s) (C). This causes the platform to stop rising and lip (A) to extend. When the lip has fully extended, the platform will continue to rise until it reaches the full raised position.

The dual lanyard feature provides dual function operation. One function raises the platform. The other function extends the lip.

Lightly pulling dual-lanyard pull ring (F) lifts dual lanyard lever (M), causing the contacts of dual lanyard switch (N) to close. The closed contacts activates electric motor (D) which causes the platform to rise (operation is the same as when using the RAISE button).

Releasing pull ring (F) causes lever (M) to open the dual-lanyard switch contacts, which de-activates the electric motor and allows the platform to lower.

When pull ring (F) is firmly pulled, the pull-ring cable lifts lever (M), which in turn, pushes lever (L) down, thus causing the spool valve in logic block (G) to shift. When this happens, oil is redirected to the lip cylinder(s), causing the platform to stop rising and the lip to extend. This function can be used to put the platform at the full below-dock position without fully raising the platform.

NOTE: The ARTD switch (K) (if equipped) must be in the OFF position for the platform to stay at the below-dock position.

* Some models are equipped with multiple cylinders.

Operating Instructions

DANGER

Stay clear of dock leveler when transport vehicle is entering or leaving dock area.

DO NOT move or use the dock leveler if anyone is under or in front of leveler.

Keep hands and feet clear of pinch points. Avoid putting any part of your body near moving parts.

Failure to follow these instructions may result in severe personal injury or death.

WARNING

Only trained personnel should operate the dock leveler.

DO NOT use a broken or damaged dock leveler. Make sure proper service and maintenance procedures have been performed on leveler before using.

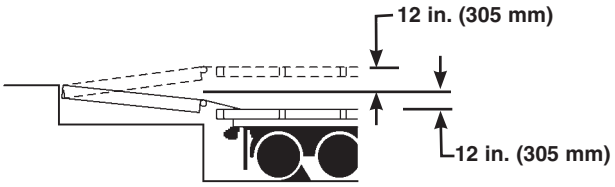
Transport vehicle wheels must be chocked unless the vehicle restraint is used. Never remove the wheel chocks until loading/unloading is finished and transport vehicles driver has been given permission to leave.

Make sure platform lip rests on the transport vehicles bed with at least 4 in. (102 mm) of overlap.

Maintain a safe distance from side edges of leveler during the loading/unloading process.

Failure to follow these instructions may result in serious personal injury or death.

WARNING



The PR hydraulic dock leveler is designed to compensate for a maximum ± 12 in.* (305 mm) of height difference between the loading dock and the transport vehicle. DO NOT use the dock leveler if the transport vehicles bed is more than 12 in. (305 mm) higher or lower than the dock floor.

*service height may vary with design specifications

DO NOT overload the dock leveler.

DO NOT operate any equipment while under the influence of alcohol or drugs.

DO NOT leave equipment or material unattended on the dock leveler.

Failure to follow these instructions may result in personal injury and/or damage to equipment.

The dock leveler operating instructions are divided into the two methods of loading and unloading:

- **For ramp loading and unloading, see Ramp Loading/Unloading Instructions on page 23.**
- **For end loading and unloading, see End Loading/Unloading Instructions on page 24.**

Operating Instructions

Ramp Loading/Unloading Instructions

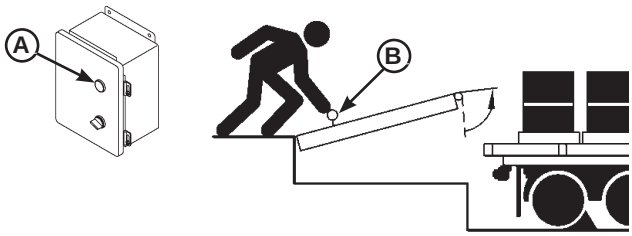
NOTE: If end unloading is required, see End Loading/Unloading Instructions on page 24.

For ramp loading or unloading, the XL dock leveler can be operated by using either the RAISE button on the control panel or the dual lanyard pull ring located in a recess at the rear of the platform.

1. Check to make sure transport vehicle is positioned squarely against dock bumpers.

2. Instruct driver to remain at the dock until the loading or unloading process has been completed.

3. Chock the transport vehicles wheels or use the vehicle restraint if available.



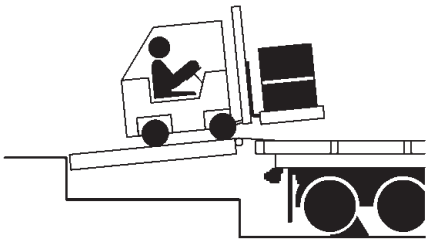
A—RAISE Button **B—Dual-Lanyard Pull Ring**

4. Extend the platform lip onto transport vehicle as follows:

   a. Raise the platform by depressing and holding RAISE button (A) or lightly pulling and holding dual-lanyard pull ring (B).

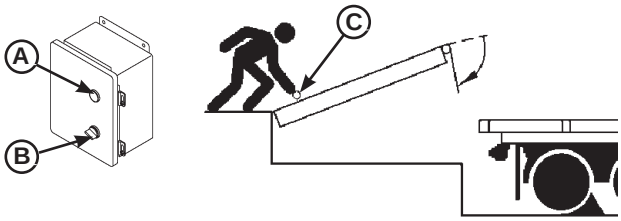
   b. Hold the RAISE button (or pull ring) until the lip is fully extended, then release the RAISE button (or pull ring). The platform will lower until the lip is resting on the transport vehicles bed.

   c. Make sure that the lip is fully extended and supported on the transports vehicle along the entire width of the platform with at least 4 in. (102 mm) of lip contacting the transport vehicles bed.



5. Proceed with loading or unloading the transport vehicle.

6. If end loading is necessary, see End Loading/ Unloading Instructions on page 24.



A—RAISE Button **C—Dual-Lanyard Pull Ring**
B—ARTD Switch

7. When loading or unloading is finished, raise the platform by depressing and holding RAISE button (A) or lightly pulling and holding dual-lanyard pull ring (C).

   Depress the RAISE button (or pull ring) until the lip folds enough to clear the transport vehicles bed, then release the RAISE button (or pull ring). The lip will fold and the platform will return to the cross-traffic position.

8. Remove chocks from transport vehicles wheels or release the vehicle restraint if used.

9. Indicate to driver that transport vehicle may leave the dock.

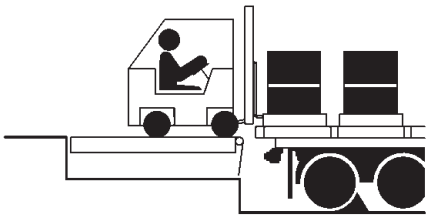
Operating Instructions

End Loading/Unloading Instructions

NOTE: If ramp loading is required, see Ramp Loading/Unloading Instructions on page 23.

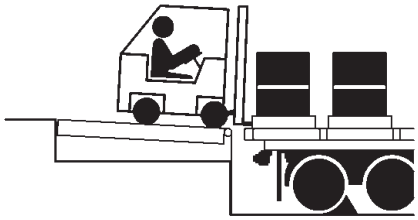
End loading or unloading can be done with the dock at the cross-traffic position or below-dock position, depending on the height of the transport vehicles *bed.*

1. Check to make sure transport vehicle is positioned squarely against dock bumpers.
2. Instruct driver to remain at the dock until the loading or unloading process has been completed.
3. Chock the transport vehicle wheels or use the vehicle restraint if available.



End Loading/Unloading — Platform at Cross-Traffic Position.

4. If transport vehicle bed is at or above dock floor level, leave leveler at the cross-traffic position and proceed with loading or unloading.

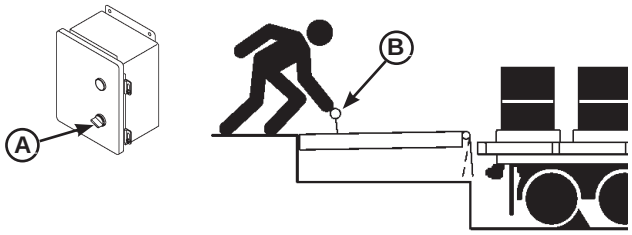


End Loading/Unloading — Platform at Below-Dock Position.

5. If transport vehicle bed is below the dock floor level, perform steps 6 –12.

⚠CAUTION

Whenever end loading or unloading with the platform in the below-dock position, make sure the ARTD switch is in the OFF position. DO NOT turn the ARTD switch to the ON position until end loading or unloading is finished.



A—ARTD Switch **B—Dual-Lanyard Pull Ring**

6. Turn the ARTD switch (A) on the control panel to the OFF position.
7. Raise the platform and extend the lip just enough to clear the lip keepers by lightly pulling, then firmly pulling the dual-lanyard pull ring (B).
8. When the platform lip clears the lip keepers, release pull ring (A). The platform will drift down to the full below-dock position.
9. Proceed with loading or unloading.

NOTE: When end unloading is finished and access to the rest of the transport vehicle is still required, the platform lip will need to be extended. See Ramp Loading/Unloading Instructions on page 23 for further instructions.

10. When the loading or unloading is finished, return the dock leveler platform to the cross-traffic (stored) position by performing one of the following:

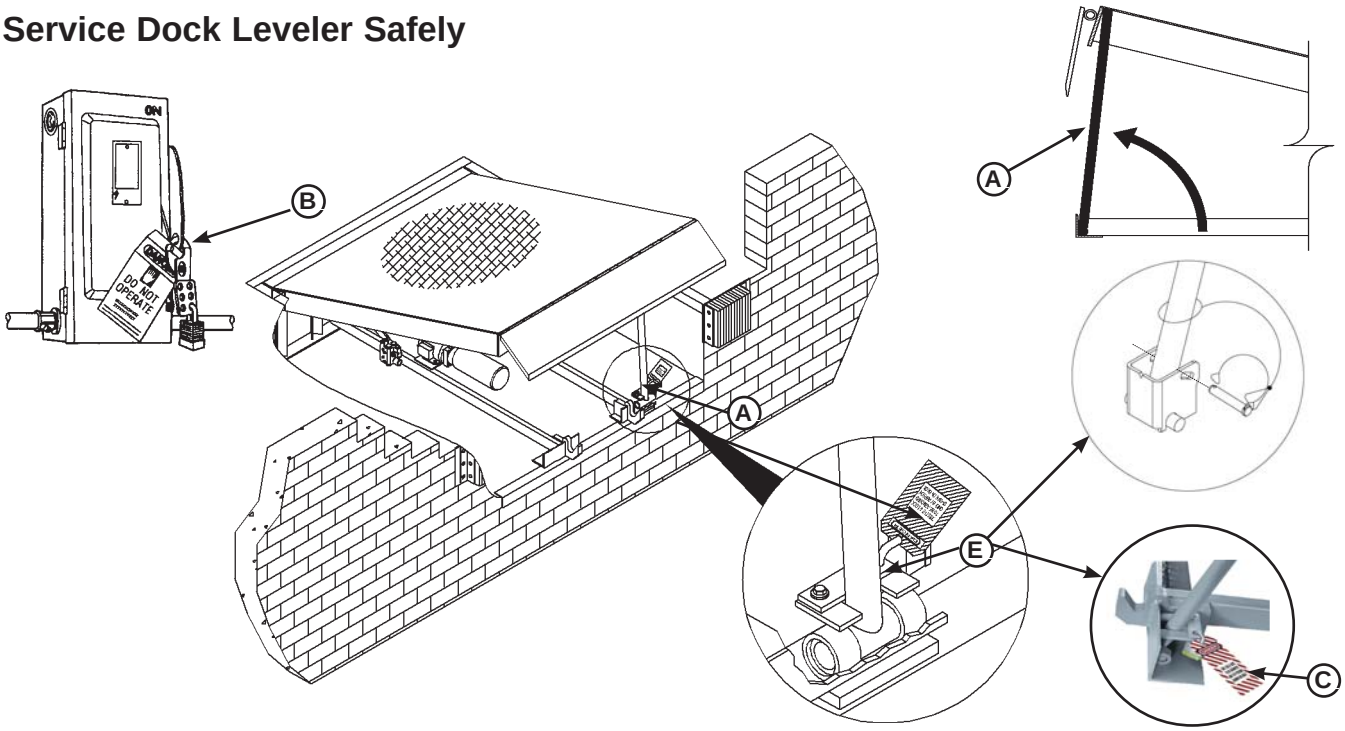
    - Turn the ARTD switch (A) to the ON position. After approximately six seconds, the platform will automatically rise to the cross-traffic position.

    OR

    - Lightly pull dual-lanyard pull ring (B) to raise the platform. When the platform lip clears the lip keepers, release the pull ring and allow the platform to lower to the cross-traffic position.

11. Remove chocks from transport vehicle wheels or release the vehicle restraint if used.
12. Indicate to the driver that the transport vehicle may leave the dock.

Service Dock Leveler Safely



A— Lip Maintenance Prop **B —Tag Out Device** **C — Lock Out Device** **E.—3 Styles of Lock**

⚠WARNING

When service under the dock leveler is required, always lock all electrical disconnects in the OFF position after raising the platform and engaging the maintenance prop. Failure to do this may result in serious personal injury or death.

⚠WARNING

Always stand clear of the dock leveler lip when working in front of the dock leveler.

The maintenance prop MUST be in the service position when working under the dock leveler. For maximum protection, use an OSHA approved locking device to lock the maintenance prop in the service position. Only the person servicing the equipment should have the key to unlock the maintenance prop.

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

Failure to follow these instructions may result in serious personal injury or death.

⚠WARNING

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before maintenance is complete. Failure to do this may result in serious personal injury or death.

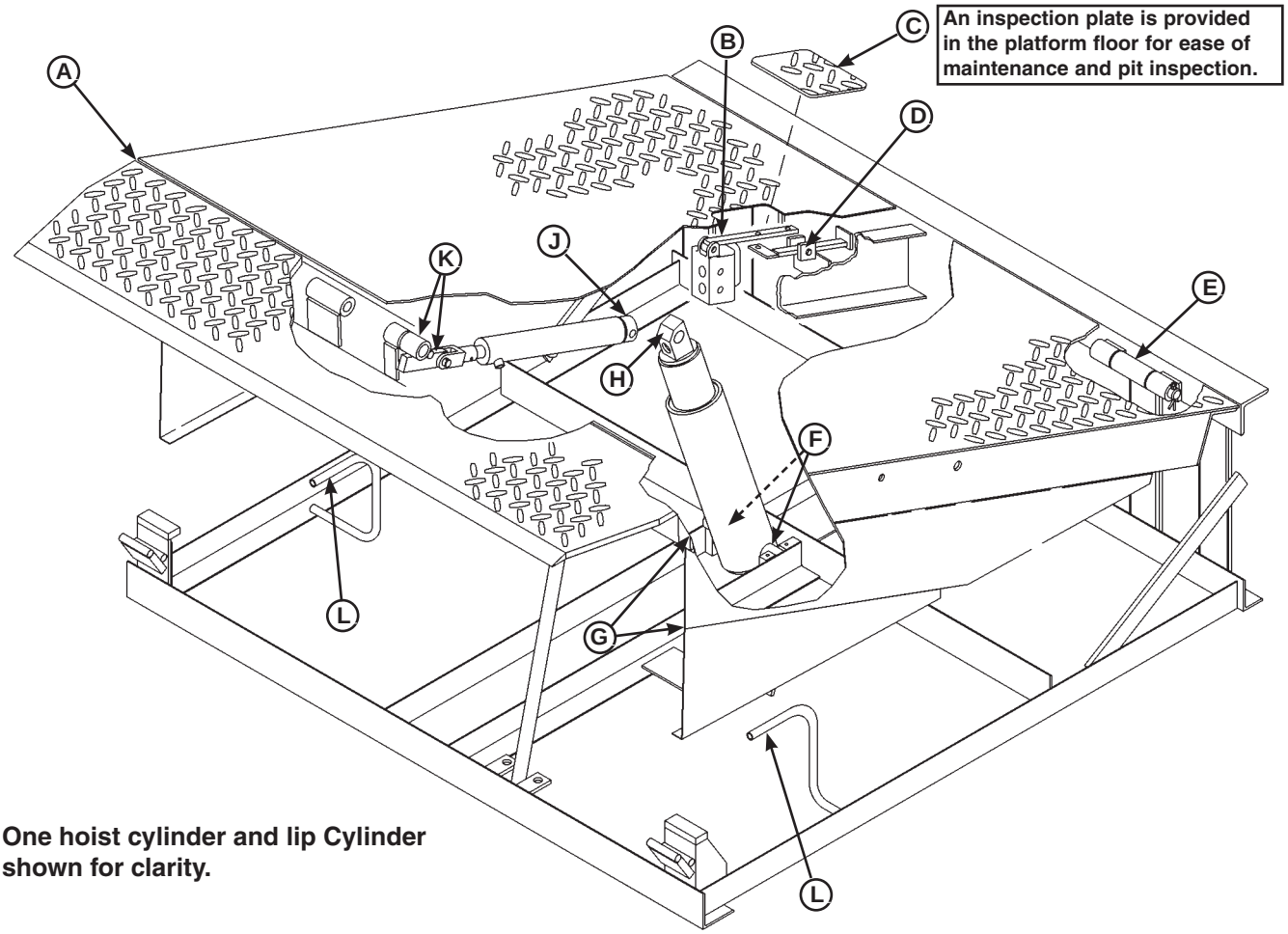
Whenever maintenance is to be performed under the dock leveler platform, support the platform with maintenance prop (E). Position the maintenance prop behind front header plate (F) while staying clear of the lip. The lip will fold down after the platform has rested on the maintenance prop. Lock the maintenance prop in the service (upright) position using an OSHA approved lockout device* (C) and tagout device* (D).

Whenever servicing the dock leveler, lock the electrical power disconnect in the OFF position. Use only an OSHA approved lockout device* (B) and tagout device (A).

Only the person servicing the equipment should have the capability to remove the lockout devices. The tagout devices* must inform that repairs are in process and clearly state who is responsible for the lockout condition.

* Refer to OSHA regulation 1910.146
* Refer to OSHA regulation 1910.147.

Periodic Maintenance



One hoist cylinder and lip Cylinder shown for clarity.

A— Lip Hinge Area
B— Valve Lever Pivot on Logic Block
C— Inspection Plate
D— Dual-Lanyard Lever Pivot
E— Platform Hinge Area
F— Platform Cylinder Trunnion
G — Toe Guard Hinges
H— Platform Cylinder-to-Platform Pin
J— Lip Cylinder-to-Platform Frame Pin
K— Lip Lifter and Lift Cylinder Pin
L — Toe Guard Pivots

⚠WARNING

Before performing any maintenance under the dock leveler, lock the electrical power source in OFF position and lock the maintenance prop in the service position using an approved locking device. (See Service Dock Leveler Safely in this section.)

Failure to follow these instructions may result in serious personal injury or death.

NOTICE

Use of fluids that do not have equivalent specifications to those in the following list will result in abnormal operation of the dock leveler and voiding of warranty.

To ensure normal operation of the dock leveler, use only aircraft hydraulic fluid designed to meet or exceed military specification MIL-H-5606 G. It is recommended that the following hydraulic fluids be used:

- ULTRA-VIS-HVI-15
- Aero Shell Fluid 4 or Fluid 41
- Mobile Aero HFA Mil-HS606A or Aero HF
- Texaco Aircraft Hydraulic Oil 15 or 5606
- Exxon Univis J13

These fluid brands can be mixed together. Mixing with fluids that do not meet or exceed MIL-H-5606 G may damage the equipment and WILL void warranty. Use of hydraulic fluids with equivalent specifications to those listed here are acceptable.

Regular maintenance must be performed on a weekly and quarterly schedule.

Weekly Maintenance

- Operate the dock leveler through the complete operating cycle to maintain lubrication.

NOTE: To thoroughly inspect the platform hinge area, put the platform in the full below-dock position.

- Inspect the platform hinge and the lip hinge areas. The hinge areas must be kept free of dirt and debris. Build-up of foreign material in the hinge areas will cause abnormal operation.

NOTICE

Failure to properly lubricate the dock leveler will cause abnormal operation of the leveler.

Quarterly Maintenance

- Lubricate the following areas with light weight machine oil:

  (A)— Lip hinge area unless equipped with grease fittings (apply oil to the top of the entire length of lip hinge when platform is at the full below-dock position and lip is folded)
  (D)— Dual-lanyard lever pivot
  (E)— Platform hinge area (apply oil to top of all platform hinges when platform is at the full below-dock position)
  (G)— Toe guard hinges (along full length of top and bottom hinges)
  (H)— Platform cylinder-to-platform frame pin
  (J)— Lip cylinder-to-platform frame pin
  (K)— Lip lifter and lift cylinder pin

- Lubricate the following areas with white lithium grease:

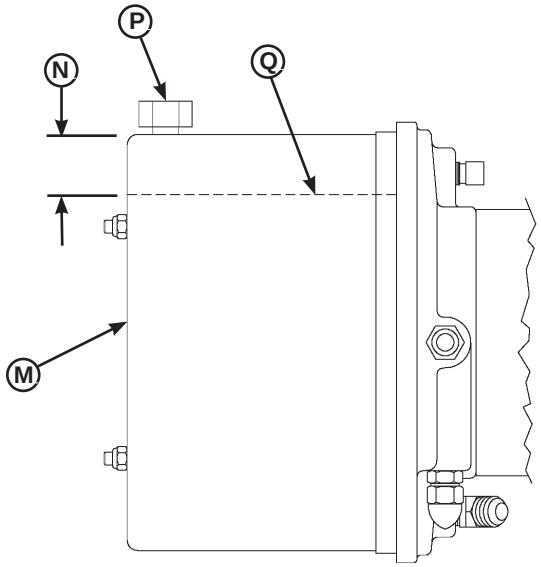
  (B)— Valve lever pivot and top of logic block spool valve.
  (F) — All platform cylinder trunnions
  (L)— Toe guard cams (where toe guard strut contacts cams)

NOTE: Apply grease to lip hinge grease fittings if equipped.

Yearly Maintenance

- Follow Quarterly Maintenance

  (A)— Change hydraulic oil (may be required more often depending upon conditions)



M — Reservoir
N — 2 in. (51 mm) (From Top of Reservoir)
P — Breather Cap
Q — Fluid Level

NOTICE

A low fluid level or the use of hydraulic fluids not equivalent to the fluid types recommended, will cause abnormal operation of the leveler and WILL void warranty.

- Check reservoir fluid level (Q):

  1. Put the dock leveler platform at the full below-dock position.
  2. Turn OFF all electrical power to the leveler.
  3. Remove inspection plate (C).
  4. Remove breather cap (P).
  5. Measure fluid level. The fluid level should be approximately 2 in. (51 mm) (N) from top of reservoir (M) with platform at the below-dock position.
  6. Add hydraulic fluid if necessary. Use only recommended fluid.
  7. Install breather cap and inspection plate.
  8. Turn ON electrical power to the leveler.
  9. Return the platform to the cross-traffic position.

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Adjust Main Pressure Relief

WARNING

When service under the dock leveler is required, always lock all electrical disconnects in the OFF position after raising the platform and engaging the maintenance prop. Failure to do this may result in serious personal injury or death.

WARNING

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before maintenance is complete. Failure to do this may result in serious personal injury or death.

WARNING

Always stand clear of the dock leveler lip when working in front of the dock leveler.

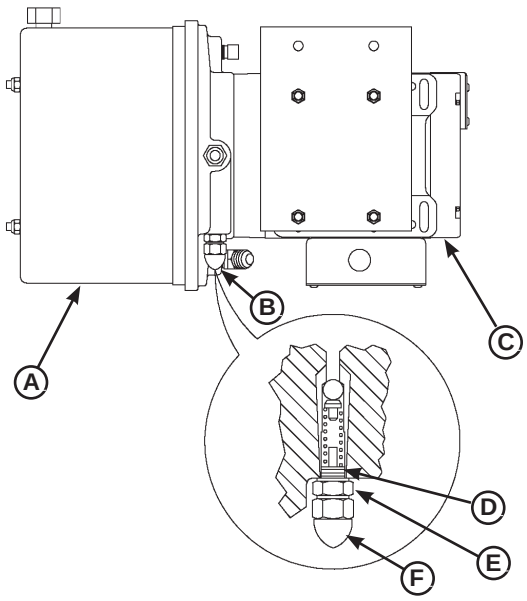
The maintenance prop MUST be in the service position when working under the dock leveler. For maximum protection, use an OSHA approved locking device to lock the maintenance prop in the service position. Only the person servicing the equipment should have the key to unlock the maintenance prop.

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

Failure to follow these instructions may result in serious personal injury or death.

NOTE: The main pressure relief may need to be increased if the platform does not rise or rises slowly and the system operates in pressure relief mode. See Troubleshooting section.

The main pressure relief may need to be decreased if the pump motor loads down when platform reaches the full raised position. See Troubleshooting section.



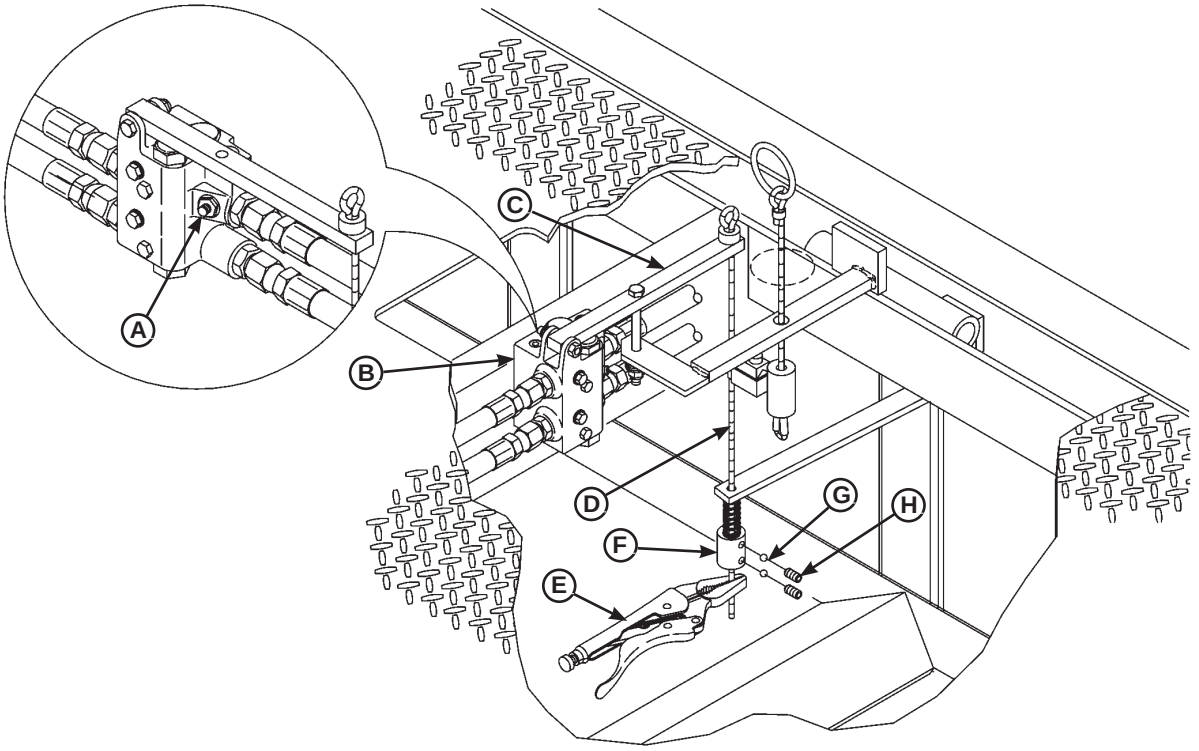
A— Reservoir
B— Main Pressure Relief
C— Pump/Motor
D—Hex Adjusting Screw
E— Jam Nut
F— Acorn Nut

To adjust the main pressure relief:

1. Raise the platform fully and engage the maintenance prop in the service position.
2. Turn OFF all electrical power to the dock leveler. Attach safety lockout and tagout devices.
3. Remove acorn nut (F).
4. Loosen jam nut (E).
5. Adjust hex adjusting screw (D) as follows:
   - Turn clockwise to increase pressure relief.
   - Turn counterclockwise to decrease pressure relief.
6. Tighten the jam nut and install the acorn nut.
7. Turn ON electrical power to the dock leveler.
8. Disengage the maintenance prop.
9. Check leveler operation.
10. Repeat steps 1– 9 as necessary.

ADJUSTMENTS

Adjust Cable Weight and Down Speed Control



A— Speed Control Adjusting Screw
B— Logic Block
C—Valve Lever
D— Cable
E— Locking Pliers
F— Cable Weight
G—Steel Ball (2 used)
H— Set Screw (2 used)

Cable Weight Adjustment

If the platform lip does not extend, or extends too soon, cable weight (F) may need adjustment. The cable weight is attached to cable (D) and is located underneath the platform, directly behind logic block (B).

The factory setting causes the lip to fully extend when 1 – 3 in. (25.4 – 76.2 mm) of travel is left in the platform cylinder.

NOTE: To prevent the cable weight from accidentally falling off the cable when adjusting the weight, attach a locking pliers or similar device to the cable just below the cable weight. If adjustment requires that the weight be moved down, allow sufficient distance between pliers and weight before adjusting.

To adjust the cable weight:

a. Loosen (do not remove) set screws (H). If set screws are removed, balls (G) may fall out.
b. To make lip extend sooner, slide the weight up.
c. To make lip extend later, slide the weight down.
d. Tighten set screws.

Down Speed Control Adjustment

If the dock leveler did not lower, it is possible that the speed control requires adjustment. The speed control adjusting screw (A) is a hex screw located in logic block (B), directly behind the upper front hose connection.

NOTE: If the platform lowers too fast, the platform will stop lowering and lock in "safety" mode.

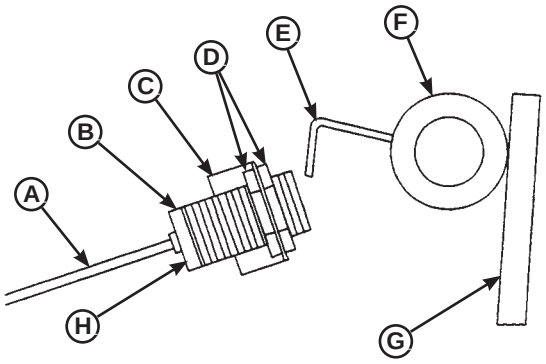
Use 1/4 turn increments when adjusting the down speed control. Check platform lowering speed after each adjustment.

To adjust the speed control:

a. Loosen the jam nut.
b. To decrease the lowering speed, turn adjusting screw (A) clockwise.
c. To increase the lowering speed, turn adjusting screw (A) counterclockwise.
d. Tighten the jam nut.

NOTE: Extreme cold and/or incorrect fluid may also cause cylinder to lock. Adjust down speed to decrease lowering speed.

Adjust Auto Return To Dock (ARTD)



A— Cable
B— Proximity Switch
C— Bracket
D— Lock Nuts
E— Target
F— Lip Hinge Tube
G—Platform Lip
H— Indicator Light

Standard PR levelers are equipped with the Auto Return To Dock (ARTD) unless leveler is interlocked with a truck restraint.

The ARTD allows the platform to automatically return to the cross-traffic (stored) position after the truck departs. The ARTD uses a proximity switch (B) located under the platform and a piece of angled steel called the target (E) that is attached to the lip hinge tube (F).

The proximity switch provides a six-second delay after the platform has lowered to the full below-dock position, after which, the platform will return to the cross-traffic position. The switch also contains an indicator light (H) that can be used for diagnosing and adjusting the switch.

NOTE: Some proximity switches have an indicator light at the back of the housing and some have the light at the side of the housing.

Adjust the ARTD as Follows:

⚠WARNING

When service under the dock leveler is required, always lock all electrical disconnects in the OFF position after raising the platform and engaging the maintenance prop. Failure to do this may result in serious personal injury or death.

⚠WARNING

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before maintenance is complete. Failure to do this may result in serious personal injury or death.

⚠WARNING

Always stand clear of the dock leveler lip when working in front of the dock leveler.

The maintenance prop MUST be in the service position when working under the dock leveler. For maximum protection, use an OSHA approved locking device to lock the maintenance prop in the service position. Only the person servicing the equipment should have the key to unlock the maintenance prop.

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

Failure to follow these instructions may result in serious personal injury or death.

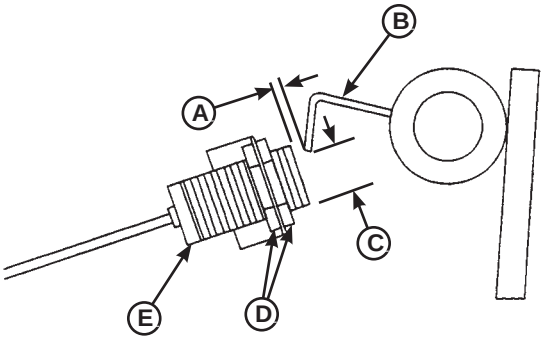
1. Raise platform fully and engage the maintenance prop in the service position. Allow platform to rest on the prop so the lip will fully fold until it contacts the lip stops.

2. Turn OFF all electrical power to the dock leveler. Attach safety lockout and tagout devices.

NOTICE

Anytime proximity switch and target are adjusted, always check for interference between target and switch before operating the leveler. Damage to switch will occur if the target contacts the switch.

The maximum torque for proximity switch lock nuts is 27 N•m (29 lb-ft). Damage to switch will occur if maximum torque is exceeded.



A— 1/4 in. (6.4 mm) Approximate
B— Target
C— 1 in. (25.4 mm) Approximate
D— Lock Nuts
E— Proximity Switch

NOTE: Distances (A and C) are typical factory settings. Use these dimensions only as a starting point when adjusting the proximity switch and target, especially if switch and/or target have been replaced.

When dimensions (A and C) are obtained, the proximity switch and target may need finer adjustments to get the ARTD to operate satisfactorily.

3. Loosen lock nuts (D). Adjust proximity switch (E) to obtain distance (A). Tighten lock nuts.

4. Bend target (B) as needed to obtain distance (C). Recheck distance (A) and readjust if necessary.

NOTE: At least two people may be required to manually move the lip.

5. After adjusting proximity switch and target, slowly move the lip up by hand while observing the target and proximity switch. The target MUST NOT contact the switch, otherwise, damage to switch will occur. Readjust switch and/or target if necessary, then recheck for interference.

6. Turn ON electrical power to the dock leveler.

7. Disengage the maintenance prop.

8. Turn the ARTD switch (on control panel) to the ON position.

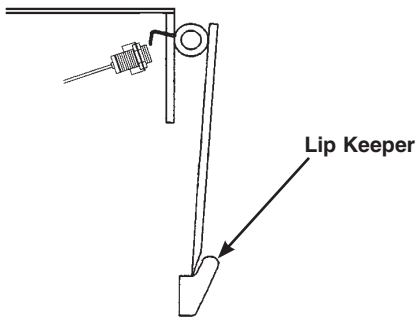
9. Raise the platform until the lip is fully extended, then allow the platform to drift to the below-dock position.

   After approximately 6 seconds, the platform must return to the cross-traffic position.

10. Adjust the proximity switch and target as necessary. Make small adjustments, then operate the dock leveler to check results. Do this until satisfied with the ARTD operation.

    Use the following illustrations to assist in fine tuning and/or diagnosing the ARTD operation.

Cross-Traffic Position

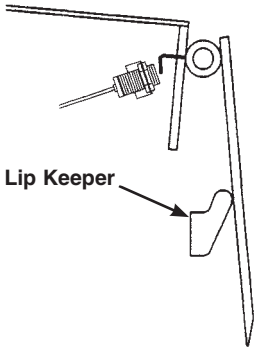


NOTE: The platform lip is fully folded when the platform is at the cross-traffic (stored) position (lip engaged with keepers) or when platform is resting on the maintenance prop.

Whenever the platform lip is at the cross-traffic position, the following conditions will exist for a normally operating ARTD:

- Target not in the sensing area of proximity switch.
- Proximity switch OFF (open) (no signal sent to control panel).
- Proximity switch indicator light is OFF.
- Platform stays at this position unless the operator activates the leveler.

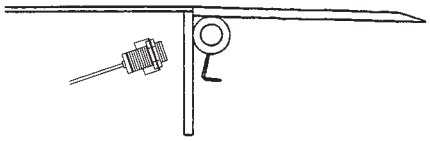
Full Below-Dock Position



Whenever the platform lip is at the full below-dock position, the following conditions will exist for a normally operating ARTD:

- Proximity switch senses target.
- Proximity switch ON (closed) (signal sent to the control panel).
- Proximity switch indicator light is ON.
- Platform will automatically rise after approximately a six-second delay, then returns to the cross-traffic position.

Lip Fully Extended Position



Whenever the platform lip is at the fully extended position, the following conditions will exist for a normally operating ARTD:

- Target not in the sensing area of proximity switch.
- Proximity switch OFF (open) (no signal sent to the control panel).
- Proximity switch indicator light is OFF.
- If the platform lip is resting on the truck bed, the platform will stay at this position unless the operator activates the leveler.

Troubleshooting

⚠WARNING

When service under the dock leveler is required, always lock all electrical disconnects in the OFF position after raising the platform and engaging the maintenance prop. Failure to do this may result in serious personal injury or death.

⚠WARNING

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before maintenance is complete. Failure to do this may result in serious personal injury or death.

⚠WARNING

Always stand clear of the dock leveler lip when working in front of the dock leveler.

The maintenance prop MUST be in the service position when working under the dock leveler. For maximum protection, use an OSHA approved locking device to lock the maintenance prop in the service position. Only the person servicing the equipment should have the key to unlock the maintenance prop.

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

Failure to follow these instructions may result in serious personal injury or death.

Before performing the detailed troubleshooting procedures, check the following items first:

- Check all fuses inside the control panel(s). Replace any blown fuse(s) with a fuse of equal specification.
- Make sure the correct voltages are present at the proper locations inside the control panel(s).

Symptom	Possible Cause	Solution
Platform does not rise. Motor does not energize.	Motor overload device tripped or fuse blown.	Reset overload relay (three-phase) or replace fuse(s) (single-phase). Determine cause of overload. *NOTE: When replacing fuse(s), the new fuse must have the same specification as the old fuse.*
	Motor starter (three-phase) or motor relay (single-phase) not energizing.	Check voltage at starter or relay coil. • If voltage is present and starter or relay does not energize, replace starter or relay. • If voltage is not present, check all components in series with the starter or relay coil.

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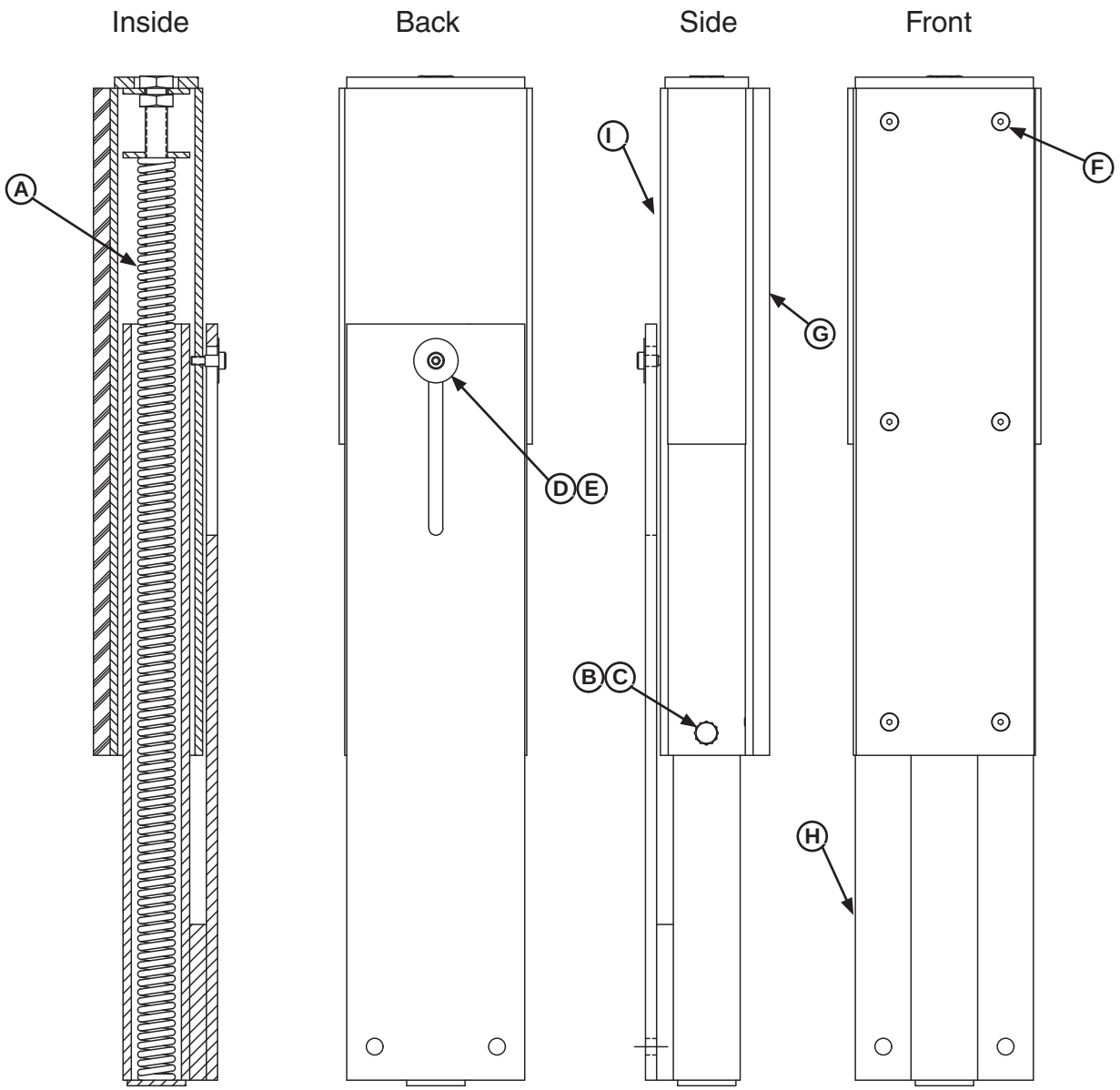
Symptom	Possible Cause	Solution
Three-phase units only: Platform does not rise. Motor hums, but does not run.	No voltage is present on one line. *NOTE: A motor that is missing voltage on one line is said to be single-phased.*	Check for blown fuses at branch circuit disconnect. Replace fuse. Determine cause of blown fuse.
		Check motor starter as follows: 1. Disconnect wires at load side of starter. 2. Energize the starter. 3. Measure line-to-line voltage at line side of starter. 4. Measure line-to-line voltage at load side of starter. 5. Line-side and load-side voltages should be approximately the same. Replace starter if voltage values are considerably different from one another.
		Check all wiring to motor for high resistance or no connection.
Three-phase units only: Platform does not rise. Motor runs in reverse	Phase reversed.	Reverse any two legs at the branch circuit disconnect.
Single-phase units only: Platform does not rise. Motor energizes, but does not run.	Line voltage too low.	Check wiring to motor for high resistance. Check for loose or corroded connections. Check if gauge of wires to motor are of correct size and specification for load requirement. Replace if necessary.
	Defective motor centrifugal switch.	Replace motor.
	Defective motor capacitor.	Replace motor.
Dock leveler equipped with ARTD: Platform does not automatically return to the cross-traffic position or operates abnormally.	The auto return proximity switch not sensing target correctly.	Adjust proximity switch and target as necessary. See Adjust Auto Return To Dock (ARTD) in the Adjustment section.
	Defective proximity switch.	Replace switch.
	Broken wire. Loose or corroded wire connections.	Repair or replace wires and connections as necessary.

TROUBLESHOOTING

Symptom	Possible Cause	Solution
Platform does not rise. Pump operates in pressure relief mode.	Heavy object(s) on platform.	Remove object(s) from platform. *NOTE: For safety reasons, the dock leveler is designed to lift only the platform's own weight.*
	Dock leveler binds.	Check for visible obstructions that could cause binding. Remove obstructions. If no obstructions found, call Poweramp Technical Services. See inside back cover for phone number and address.
	Pressure relief set too low.	Increase pressure relief. See Adjust Main Pressure Relief in the Adjustment section. *NOTE: The pressure relief valve must not be set at a level that causes the motor operating current to exceed the full load amp value* at any time, including when operating in pressure relief.* ** The full load amp value can be found on the inside cover of the control panel.*
Platform rises slowly.	Low hydraulic fluid.	Add fluid as needed. See Periodic Maintenance in the Maintenance section.
	Contaminated hydraulic system.	Clean and inspect valves. Flush contaminated oil from hydraulic system. Fill system with new oil. See Periodic Maintenance in the Maintenance section.
	Damaged or restricted hydraulic hose(s).	Replace damaged hose(s). Remove restriction.
	Pressure relief set too low.	Increase pressure relief. See Adjust Main Pressure Relief in the Adjustment section. *NOTE: The pressure relief valve must not be set at a level that causes the motor operating current to exceed the full load amp value* at any time, including when operating in pressure relief.* ** The full load amp value can be found on the inside cover of the control panel.*
Pump motor loads down when platform reaches the full raised position.	Pressure relief set too high.	Decrease pressure relief. See Adjust Main Pressure Relief in the Adjustment section. *NOTE: The pressure relief valve must not be set at a level that causes the motor operating current to exceed the full load amp value* at any time, including when operating in pressure relief.* ** The full load amp value can be found on the inside cover of the control panel.*

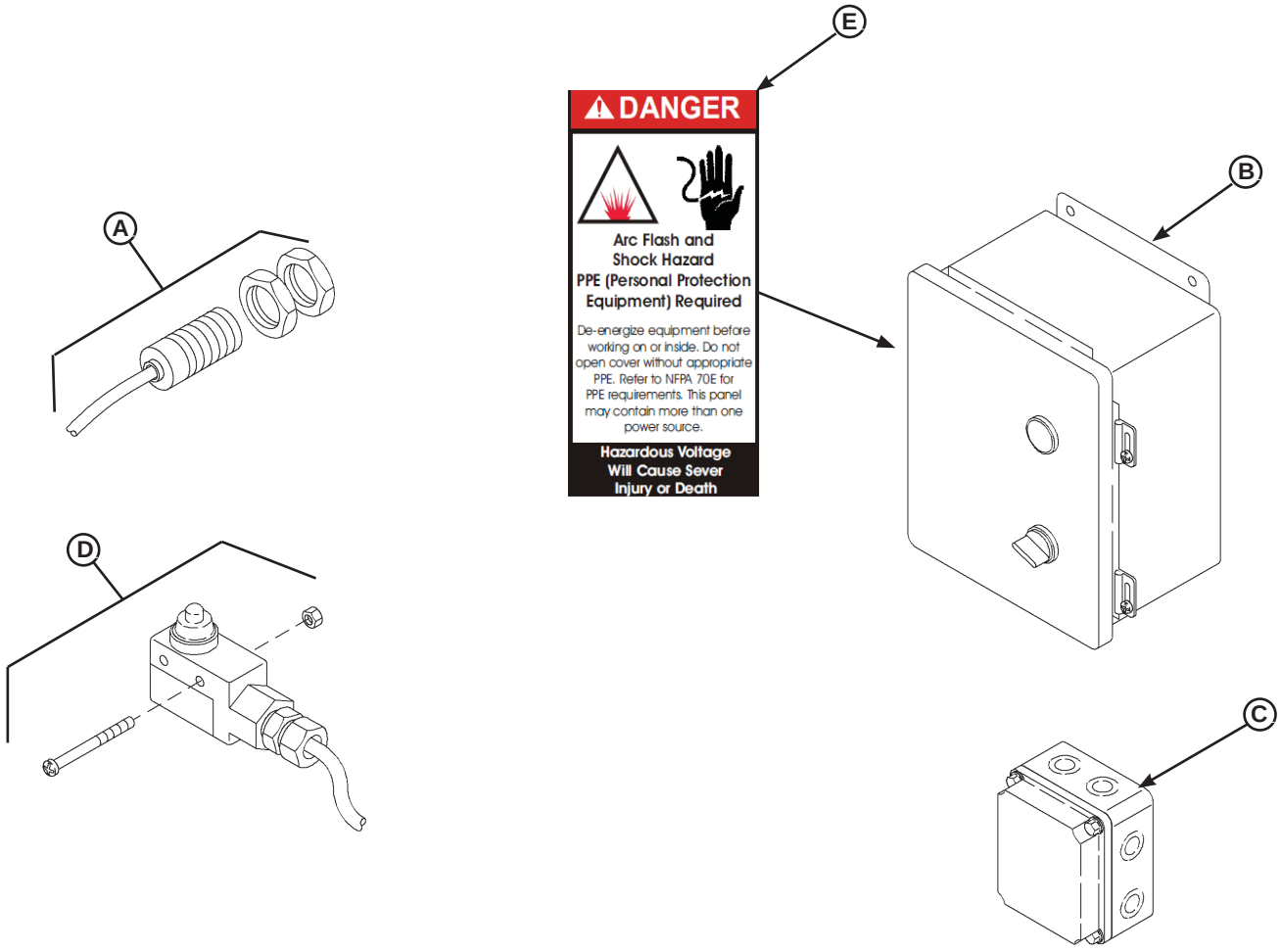
Symptom	Possible Cause	Solution
Platform does not rise to full height.	Low hydraulic fluid.	Add fluid as needed. See Periodic Maintenance in the Maintenance section.
Platform DOES rise to full height, but lip DOES NOT extend or extend fully.	Low hydraulic fluid.	Add fluid as needed. See Periodic Maintenance in the Maintenance section.
	Logic block (valve) lever cable weight too low on cable.	Adjust cable weight. See Adjust Cable Weight and Down Speed Control in the Adjustment section.
Lip does not extend.	Logic block spool valve stuck in the up position or valve lever binding so that the lever will not push the spool down.	Apply penetrating oil to spool area and valve lever pivot at top of logic block. If necessary, disconnect the valve lever from logic block. Move spool valve up and down until spool valve slides freely. If the spool valve cannot be made to slide freely, replace spool valve. Lubricate valve lever pivot with white lithium grease.
Lip extends almost immediately when the RAISE button is pushed. Platform rises after lip is fully extended.	Logic block spool valve stuck in the down position or valve lever binding causing lever to prematurely push the spool down.	Apply penetrating oil to spool area and valve lever pivot at top of logic block. If necessary, disconnect the valve lever from logic block. Move spool valve up and down until spool valve slides freely. If the spool valve cannot be made to slide freely, replace spool valve. Lubricate valve lever pivot with white lithium grease.
Platform locks into "safety" as platform lowers. Lip drops to vertical position.	Platform lowering speed is too fast.	Adjust platform down speed control. See Adjust Cable Weight and Down Speed Control in the Adjustment section. *NOTE: Extreme cold weather OR incorrect fluid may cause platform to lock. Adjustment is same.*

PARTS



Item	Quantity	Part Number	Description
A	1	0941-0004	Compression Spring
B	2	2101-0020	Hex Head Capscrew
C	2	2101-0042	Hex Nut
D	1	2101-0132	Fender Washer
E	1	2101-0165	Socket Head Shoulder Screw
F	6	2101-0197	Flat Head Capscrew
G	1	9952-0027	Bumper - Yellow 3/4 x 8 x 30
H	1	9954-0010	Bumper Mounting Weldment- Lower
I	1	9954-0012	Bumper Mounting Weldment- Upper
A-I	1	9956-0001	Bumper Assembly -XL Series

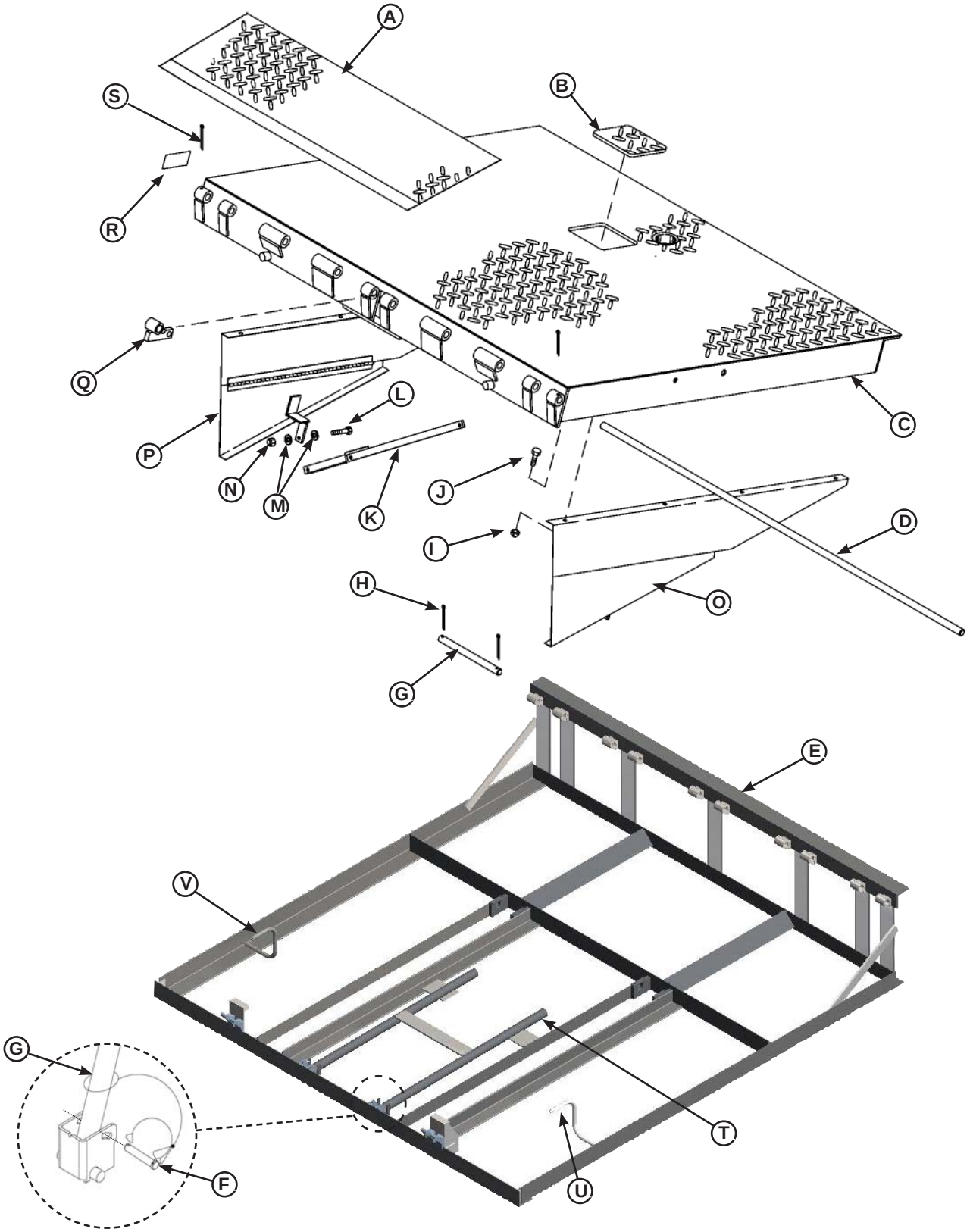
Controls



Item	Quantity	Part Number	Description
A	1	0615-0040	Proximity Switch with Harness (ARTD Feature Only)
B	1	*	Push Button Controller
C	1	9511-0004	J-Box, Standard (4 x 4 in. Metal Box)
		9512-0429	J-Box, Cold Weather (5 x 5 in. Plastic Box)
D	1	0961-0014	Micro switch with Harness (Dual Lanyard Feature Only)
E	1	1751-0736	Decal, Arc Flash

* Provide dock leveler serial number, voltage, phase, and options when calling or faxing controller orders.

Frame and Platform



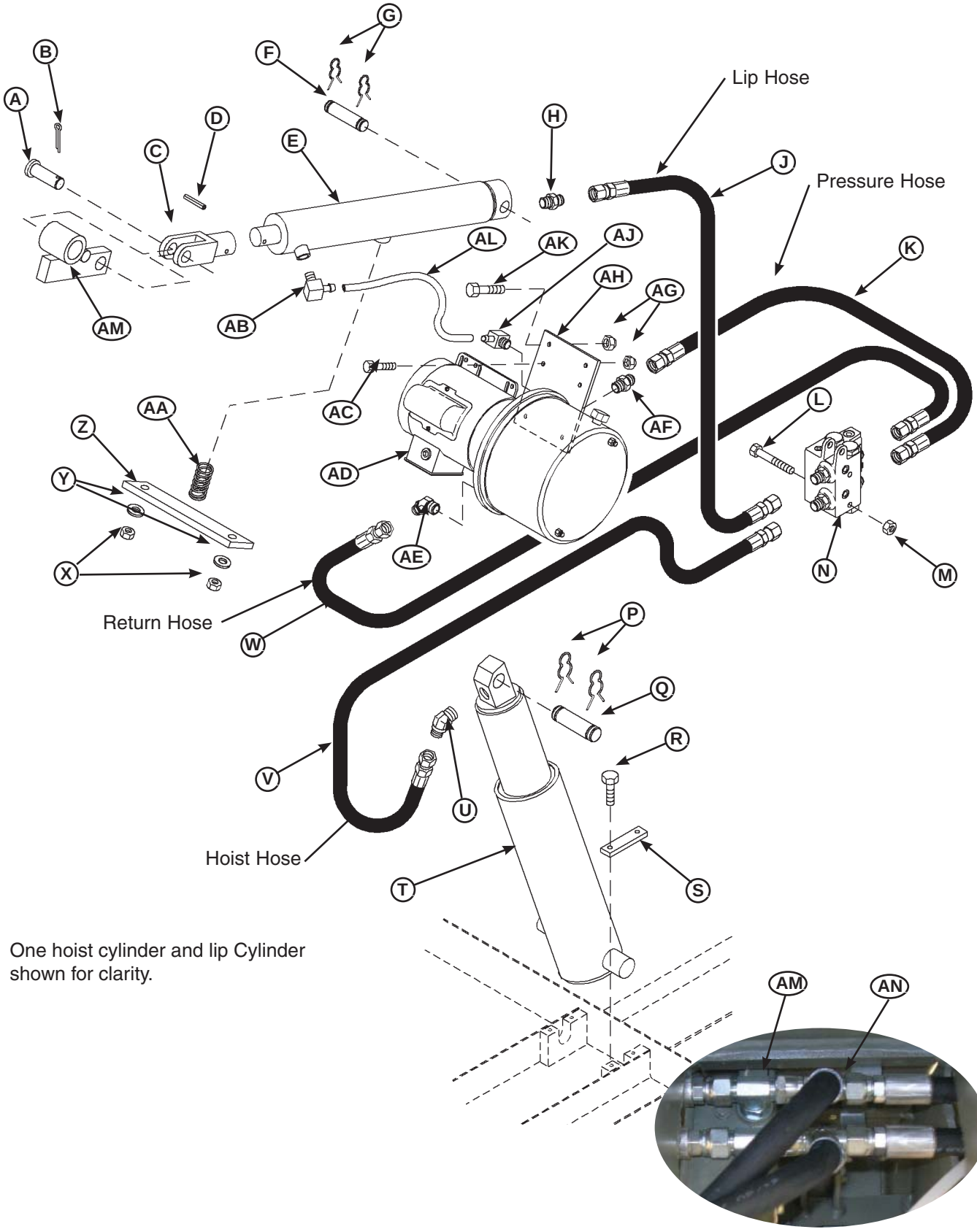
Frame and Platform

Item	Quantity	Part Number	Description
A	1	0595-____[1]	Lip, Welded Assembly
B	1	7823-____[2]	Plate, Inspection
C	1	9515-____[1]	Platform, Welded Assembly
D	1	9202-0050	6’ x 1” Pin, Lip Hinge, 2003 and Newer Pin
		9202-0051	6-1/2’ x 1” Pin, Lip Hinge, 2003 and Newer Pin
		9202-0052	7’ x 1” Pin, Lip Hinge, 2003 and Newer Pin
E	1	8435-____[1]	Frame, Standard
		8435-____[1]	Frame, CleanPit
F	2	9201-0006	Prop Pin and Clip
G	3	9202-0002	Rear Hinge Pin
		9202-0009	Rear Hinge Pin Stainless Steel
H	6	2101-0047	Cotter Pin, 1/4 x 2 in.
I	AR	2101-0039	Nylon Lock Nut, 5/16-18 UNC
J	AR	2101-0011	Cap Screw, 5/16-18 UNC x 1 in.
K	2	5275-0001	Toe Guard Linkage
L	6	2101-0089	Cap Screw, 3/8-16 UNC x 2.0 in.
M	12	2101-0060	Washer, 3/8 in., Flat
N	6	2101-0040	Nylon Lock Nut, 3/8-16 UNC
O	1	0015-____[1]	Folding or Sliding Toe Guard, Left
P	1	0015-____[1]	Folding or Sliding Toe guard, Right
Q	2	0523-0024	Lip Lifter Short (Casting)
		0523-0154	Lip Lifter Long (Weldment)
R	1	1751-0010	Decal, Model/Serial ID
S	2	2101-0046	Cotter Pin, 1/4 x 1-1/4 in.
T	1	9225-____[1]	Prop Rod, Standard Only
		9225-____[1]	Prop Rod, CleanPit Only
U	1	0015-0001	Toe Guard Pivot LH
		0015-0003	Toe Guard Pivot LH 26” deep pit
V	1	0015-0002	Toe Guard Pivot RH
		0015-0004	Toe Guard Pivot RH 26” deep pit

AR = As Required

[1] Provide dock leveler serial number, platform size, and lip size when calling or faxing orders.
[2] Provide length and width of inspection plate opening when calling or faxing orders.

Hydraulic Components



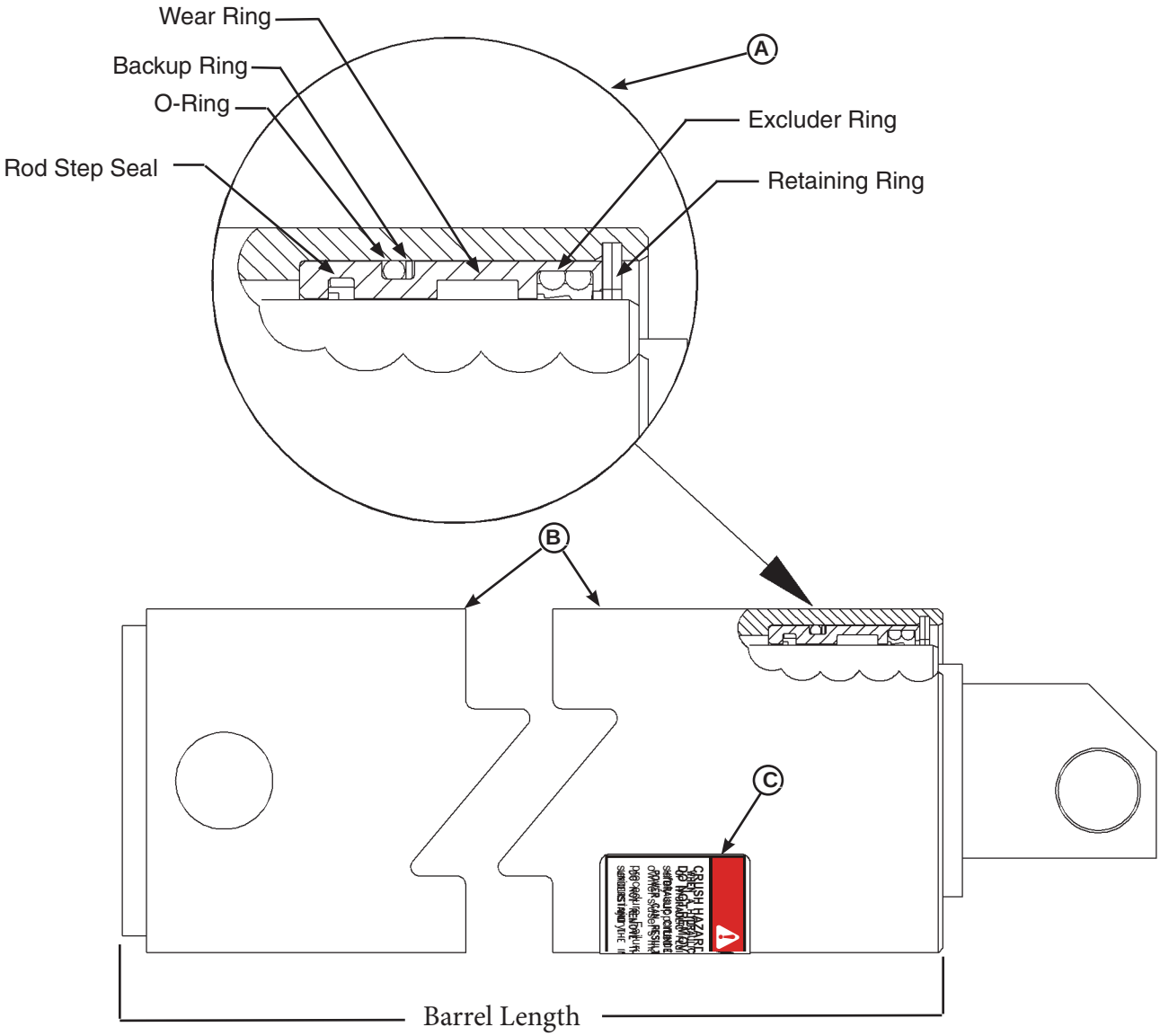
One hoist cylinder and lip Cylinder shown for clarity.

Hydraulic Components

Item	Quantity	Part Number	Description
A	2	0522-0005	Clevis Pin
B	2	2101-0045	Cotter Pin
C	2	0522-0156	Yoke
D	2	0521-0005	Roll Pin
E	2	0525-0086	Lip Cylinder, 13-3/4 in. (349 mm) Barrel Length
		0525-0087	Lip Cylinder, 20-1/8 in. (511 mm) Barrel Length
F	2	9202-0004	Pin, 3/4 x 4.38 in.
G	4	2101-0049	Clip, Hairpin
H	2	9301-0111	Fitting, #6-ORB Male x #8-JIC Male
J	2	9904-____[1]	Hose, Logic Block-to-Lip Cylinder
K	1	9904-____[1]	Hose, Pump Pressure Port-to-Logic Block
L	2	2101-0015	Cap Screw, 5/16-18 UNC x 3-1/4 in.
M	2	2101-0039	Nylon Lock Nut, 5/16-18 UNC
N	1	9575-____[3]	Logic Block
P	4	2101-0050	Clip, Hairpin
Q	2	9202-0005	Pin, 1 x 3-3/4 in.
R	8	2101-0009	Cap Screw, 5/16-18 UNC x 3/4 in.
S	4	7942-0006	Platform Cylinder, Hold Down
T	2	0525-0043	Cylinder, Platform, 15-1/2 in. (394 mm) Barrel Length
		0525-0044	Cylinder, Platform, 17-1/2 in. (445 mm) Barrel Length
		0525-0045	Cylinder, Platform, 19-1/2 in. (495 mm) Barrel Length
		0525-0046	Cylinder, Platform, 21-1/2 in. (546 mm) Barrel Length
U	2	9301-0120	Elbow, 45° #8-ORB Male x #8-JIC Male
V	2	9904-____[1]	Hose, Logic Block-to-Platform Cylinder
W	1	9904-____[1]	Hose, Logic Block-to-Pump Return Port
X	4	2101-0040	Nylon Lock Nut, 3/8-16 UNC
Y	4	2101-0060	Washer, 3/8 in.
Z	2	9455-____[2]	Hold-Down, Lip Cylinder
AA	2	0522-0002	Spring
AB	2	0521-0007	Elbow, 90° 1/4 NPT Male x 1/4 Tube
AC	2	2101-0011	Cap Screw, 5/16-18 UNC x 1 in.
AD	1	9395-____[3]	Power Pack Complete
AE	1	0521-0016	Elbow, 45° 3/8 NPT Male x #8-JIC Male
AF	1	0521-0015	Straight Fitting, 3/8 NPT Male x #8-JIC Male
AG	6	2101-0039	Nylon Lock Nut, 5/16-18 UNC in.
AH	1	9392-0042	Mounting Bar
AJ	1	0521-0007	Elbow, 90° 1/4 NPT Male x 1/4 Tube
AK	4	2101-0011	Cap Screw, 5/16-18 UNC x 1 in.
AL	1	R509-____[1]	Tube, Vent (3/8 OD x 1/16 in. Wall)
AM	2	9301-0155	Tee, #8 orbm #8 Jic #8 Jic
AN	2	9301-0127	Run, Tee, #8orbm #8 Jic #8Jic

[1] Provide length and diameter of hose when calling or faxing orders.
[2] Provide length of lip cylinder when calling or faxing orders.
[3] Provide dock leveler serial number, voltage, and phase when calling or faxing orders.

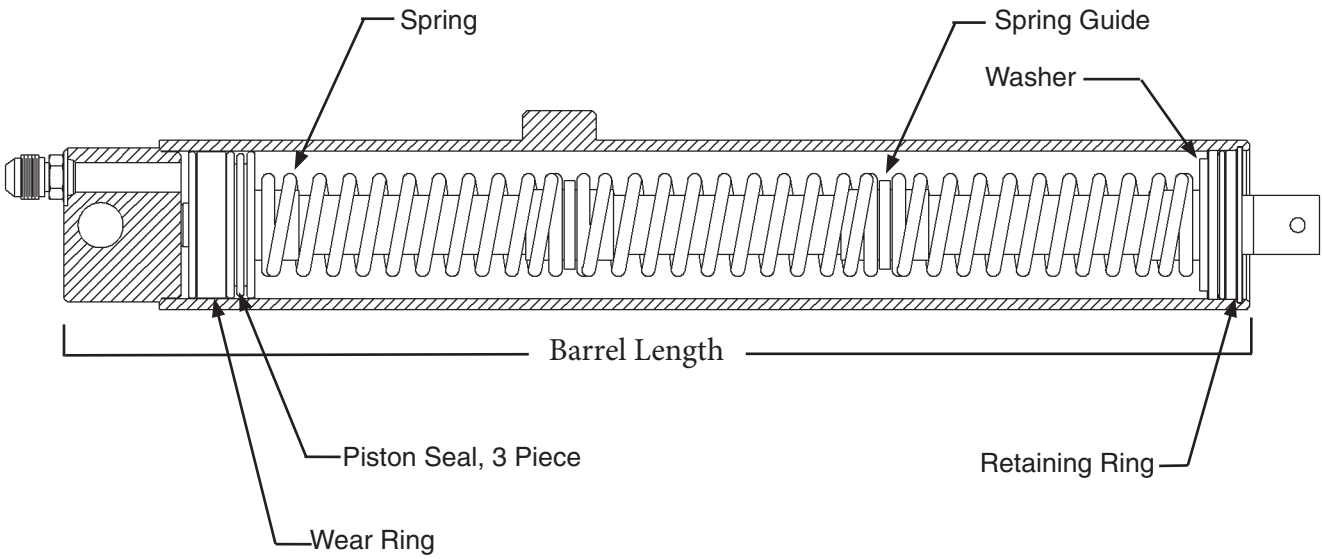
Platform Cylinder Repair Parts



Item	Quantity	Part Number	Description
A	1	0525-0048	Seal Kit 1992 and Newer
		0525-0013	Seal Kit 1991 and Older
B	1	0525-0043	Cylinder, Platform, 15-1/2 in. (394 mm) Barrel Length
		0525-0044	Cylinder, Platform, 17-1/2 in. (445 mm) Barrel Length
		0525-0045	Cylinder, Platform, 19-1/2 in. (495 mm) Barrel Length
		0525-0046	Cylinder, Platform, 21-1/2 in. (546 mm) Barrel Length
C	1	1751-0138	Decal

*Provide dock leveler serial number when calling or faxing orders.

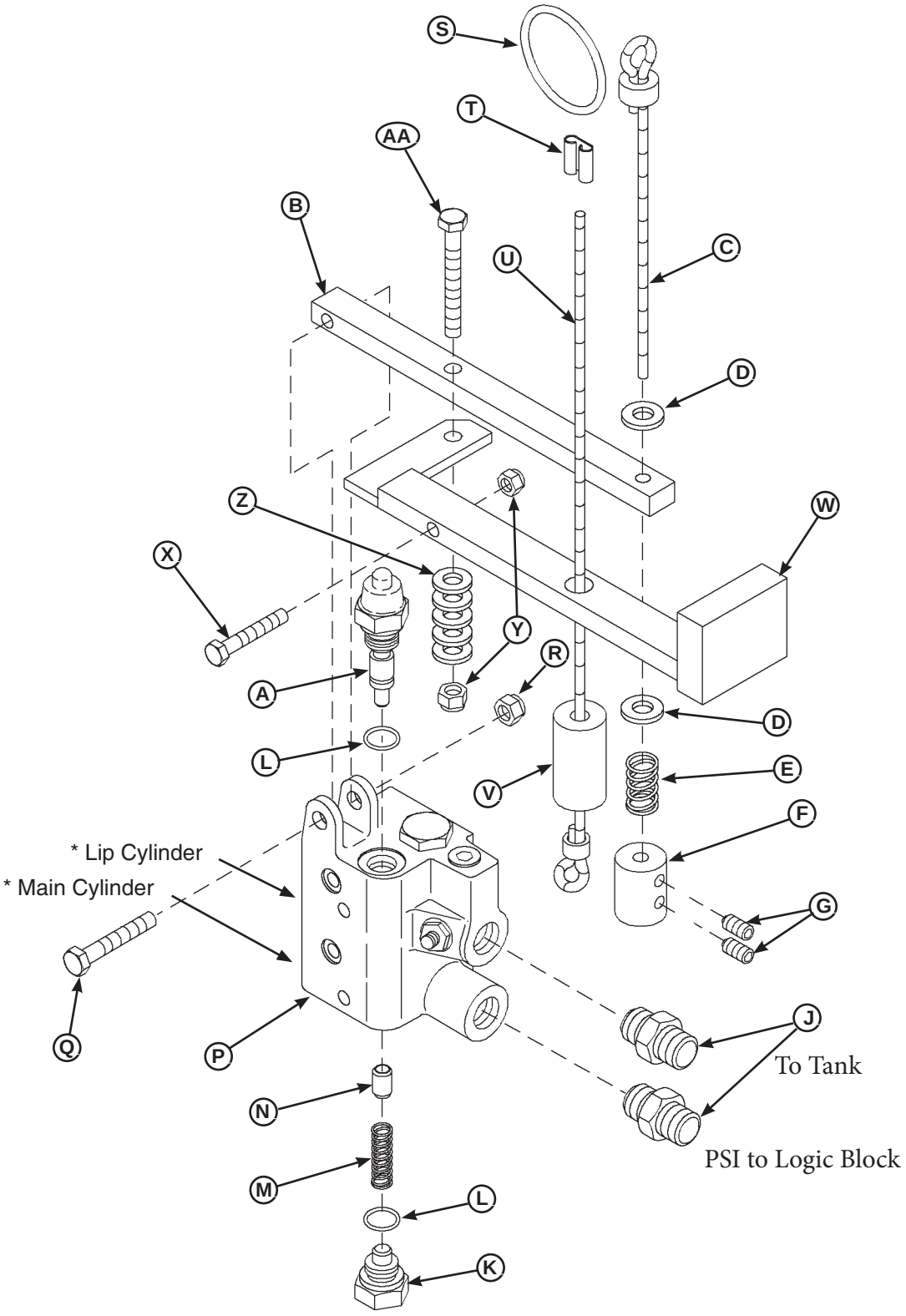
Lip Cylinder Repair Parts



Item	Quantity	Part Number	Description
A	1	0525-0059	Seal Kit 1992 and Newer
		0025-0014	Seal Kit 1991 and Older
B	1	0525-0086	Lip Cylinder, Complete, 14 in. Barrel Length
		0525-0087	Lip Cylinder, Complete, 20 in. Barrel Length

*Provide dock leveler serial number when calling or faxing orders.

Logic Block Assembly



Logic Block Assembly

Logic Block and Lever Arm			
Item	**Quantity**	**Part Number**	**Description**
A	1	9574-0001	Spool Valve, Logic Block, Standard
		9574-0002	Spool Valve, Logic Block, Cold Weather
B	1	5455-0001	Lever Arm, Standard
		5455-0004	Lever Arm, Cold Weather

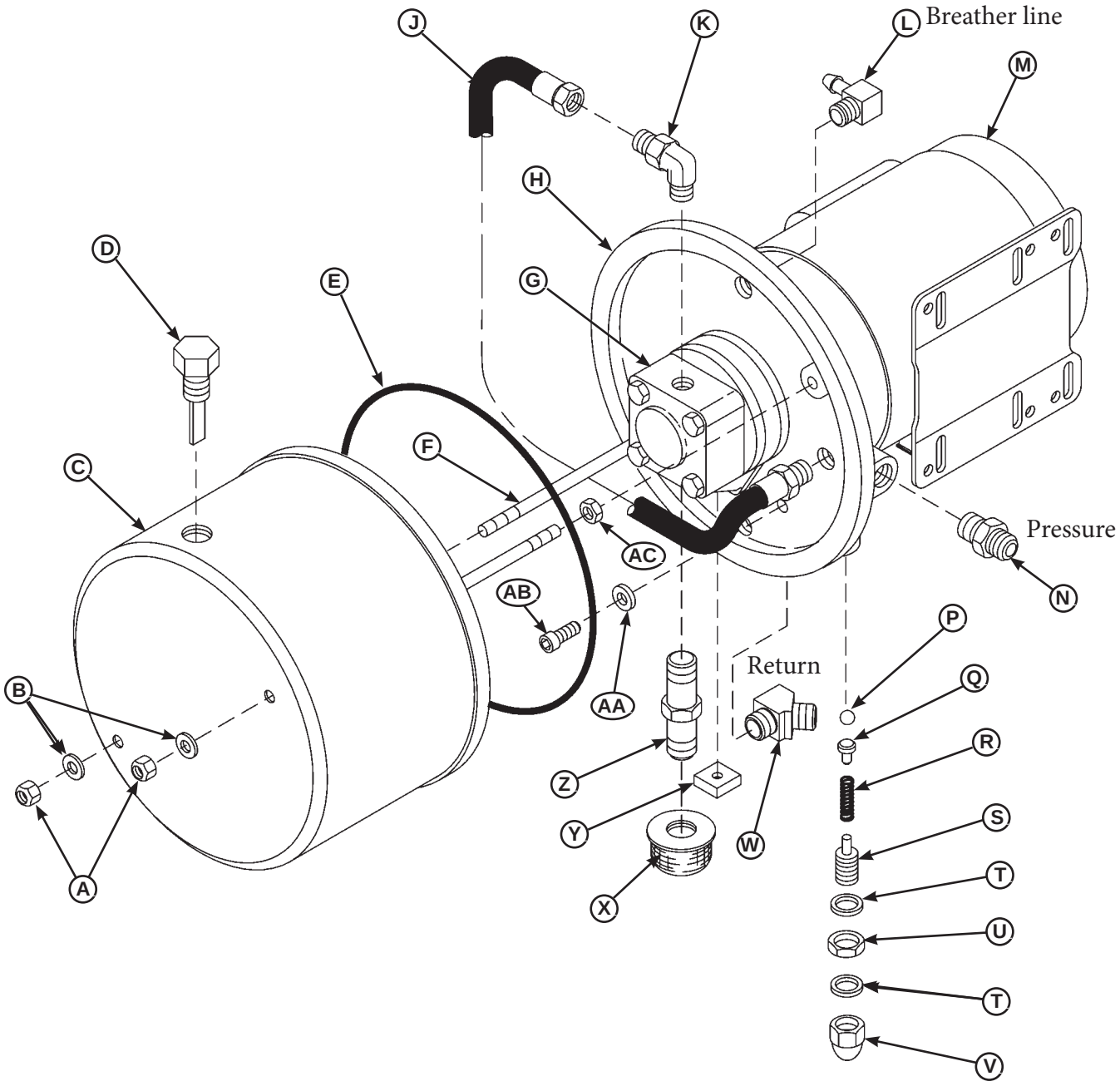
Logic Block Cable Assembly			
Item	**Quantity**	**Part Number**	**Description**
C	1	7955-0001	Cable Subassembly, Logic Block
D	2	2101-0059	Washer, 1/4 in.
E	1	9572-0004	Spring
F	1	8102-0001	Weight, Logic Block Cable
G	2	2101-0032	Set Screw, Socket-Head, 1/4-20 UNC x 3/8 in.
	1	5265-0002	Cable Weight Assembly, Logic Block (Includes Items C – H)

Logic Block Assembly			
Item	**Quantity**	**Part Number**	**Description**
J	2	9301-0112	Fitting, #8-ORB Male x #8-JIC Male
K	1	9572-0002	Plug, Spool Valve
L	2	9572-0003	Gasket, Spool Valve
M	1	9572-0004	Spring, Spool Valve
N	1	9572-0013	Dowel Pin, Cold Weather/Wash Down Feature Only
P	1	*	Logic Block, Complete (Includes Items A and K – N)
Q	1	2101-0014	Cap Screw, 5/16-18 UNC x 2 in.
R	1	2101-0039	Nylon Lock Nut, 5/16-18 UNC

Dual Lanyard Assembly (Optional)			
Item	**Quantity**	**Part Number**	**Description**
S	1	4261-0004	Ring, Pull
T	1	7952-0002	Clasp, Cable
U	1	7955-0001	Cable Subassembly
V	1	8102-0002	Weight
	1	5265-0001	Cable Assembly (Includes Items S – V)
W	1	5405-0001	Lever Arm
X	1	2101-0068	Cap Screw, 5/16-18 UNC x 1-3/4 in.
Y	2	2101-0039	Nylon Lock Nut, 5/16-18 UNC
Z	5	2101-0163	Flat Washer, 5/16 in.
AA	1	2101-0015	Cap Screw, 5/16-18 UNC x 3-1/4 in.

** Must provide serial number or Job number.*

Power Pack Assembly

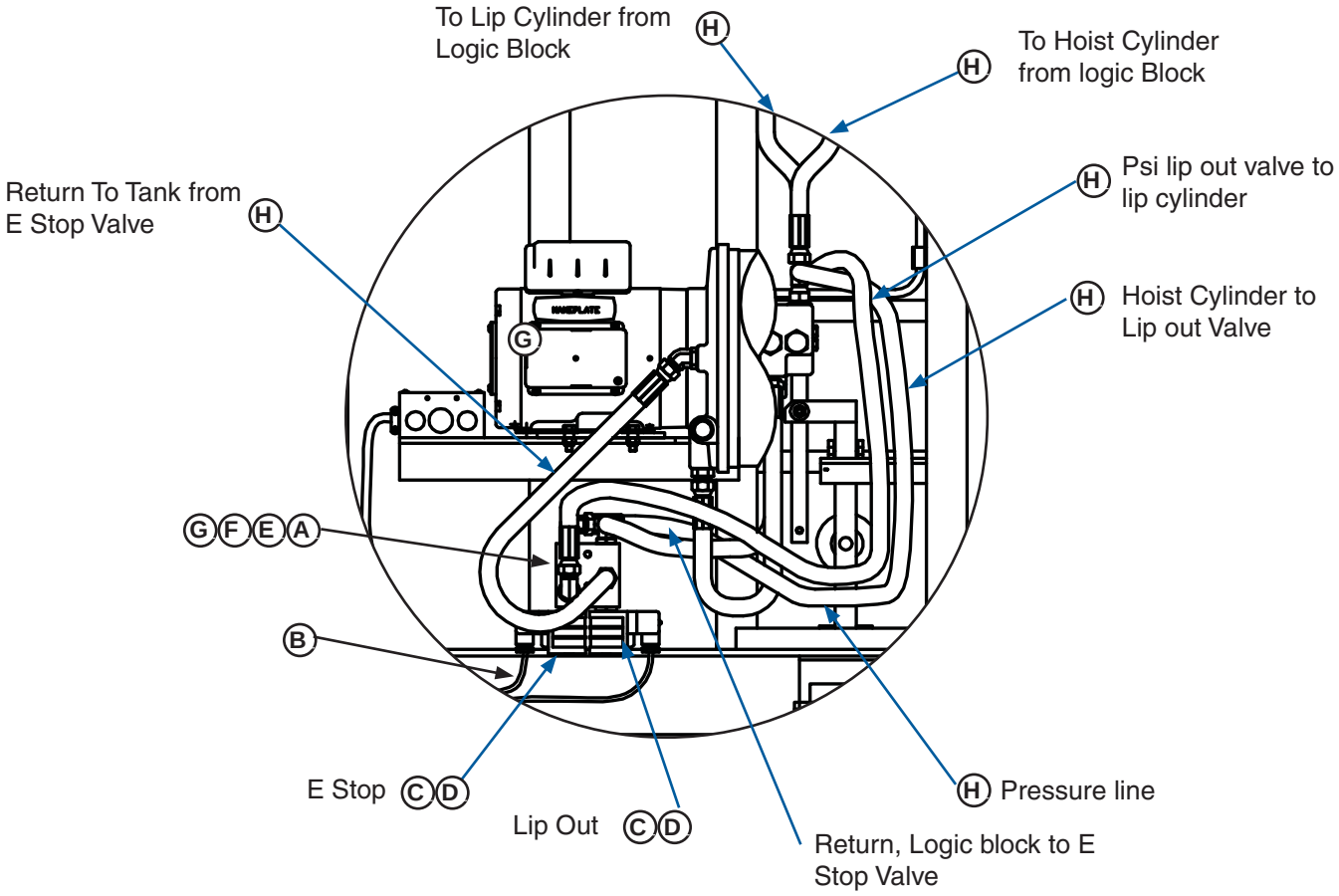


Power Pack Assembly

Item	Quantity	Part Number	Description
A	2	2101-0039	Nylon Lock Nut, 5/16-18 UNC
B	2	9301-0029	Seal, Thread
C	1	9302-0015	Reservoir
D	1	9301-0199	Breather Cap, 3/8 NPT Male
E	1	9301-0027	O-Ring (Reservoir)
F	2	9302-0013	Tie Rod (Reservoir)
G	1	9301-____ [1]	Pump Only
	4	2101-0016	Cap Screw, 5/16-18 UNC x 3-1/2 in., Grade 5
	1	9301-0028	Gasket, Pump
	1	9303-0002	Coupling Assembly
H	1	9302-0017	Plate, Drive
J	1	9904-0001	Hose
K	1	0521-0017	90° Elbow, 3/8 NPT Male x #8-JIC Male
L	1	0521-0007	90° Elbow, 1/4 NPT Male x 1/4 Tube
M	1	3411-____ [2]	Motor Only
N	1	0521-0015	Straight Fitting, 3/8 NPT Male x #8-JIC Male
P	1	0521-0014	Ball, Check
Q	1	9301-0024	Guide, Check Ball
R	1	9302-0009	Spring, Relief Valve
S	1	9303-0003	Screw, Adjusting
T	2	9301-0014	Washer, Nylon, 11/16 in. OD x 1/2 in. ID
U	1	9301-0015	Nut, Jam, 1/2-20 UNF
V	1	9301-0016	Nut, Acorn, 1/2-20 UNF
W	1	0521-0016	45° Elbow, 3/8 NPT Male x #8-JIC Male
X	1	9301-0009	Strainer, Suction
Y	1	9301-0082	Magnet
Z	1	9301-0008	Pipe Nipple, 3/8 NPT x 3 in.
AA	2	9301-0003	Washer, Aluminum, 9/16 in. OD x 3/8 in. ID x 1/16 in.
AB	2	9301-0004	Screw, Socket Head, 3/8-16 UNC x 1-3/4 in.
AC	2	2101-0063	Nut, Jam 5/16-18 UNC
	1	9395-____ [1]	Power Pack Complete (Includes All Items Except L, N, and W)

[1] Provide dock leveler serial number and type of installation when calling or faxing orders.
[2] Provide dock leveler serial number, voltage, and phase when calling or faxing orders.

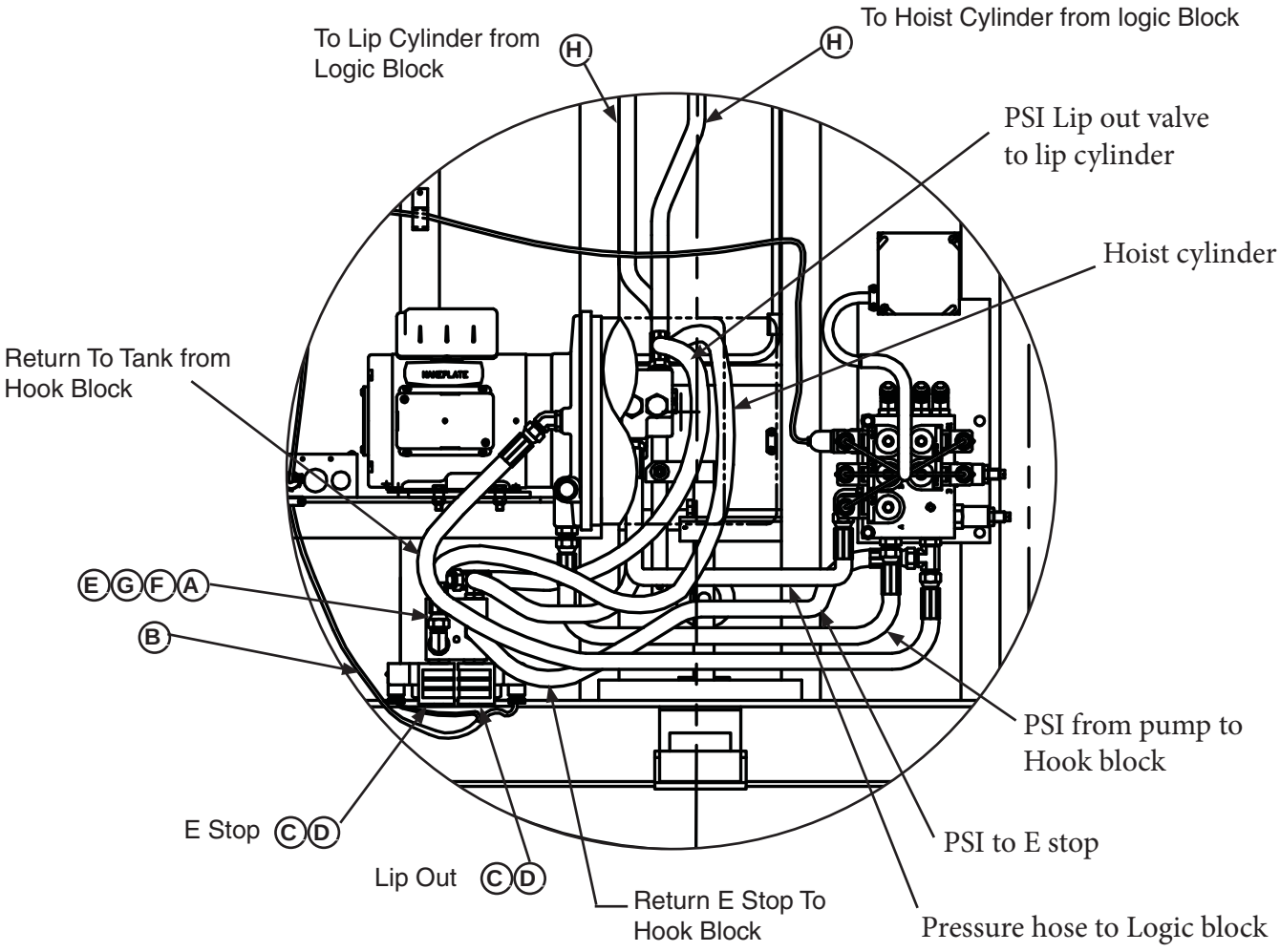
E Stop & Lip



Item	Quantity	Part Number	Description
A	1	8583-0063	Valve Block E-Stop and Lip Out
B	1	4305-0263	Cable Harness (2 coils)
C	2	8581-0005	Cartridge Vale 3 Way (included when ordering 8583-0063)
D	2	8581-0004	Coil
E	2	2101-0077	Hex Head cap Screw
F	4	8581-0005	Washer Flat
G	2	2101-0039	Nylon Lock Nut, 5/16-18 UNC
H	AR	9904-0106	Hyd Hose,

* Provide dock leveler serial number and size of platform when calling or faxing orders.
** Provide hose lengths and fitting sizes

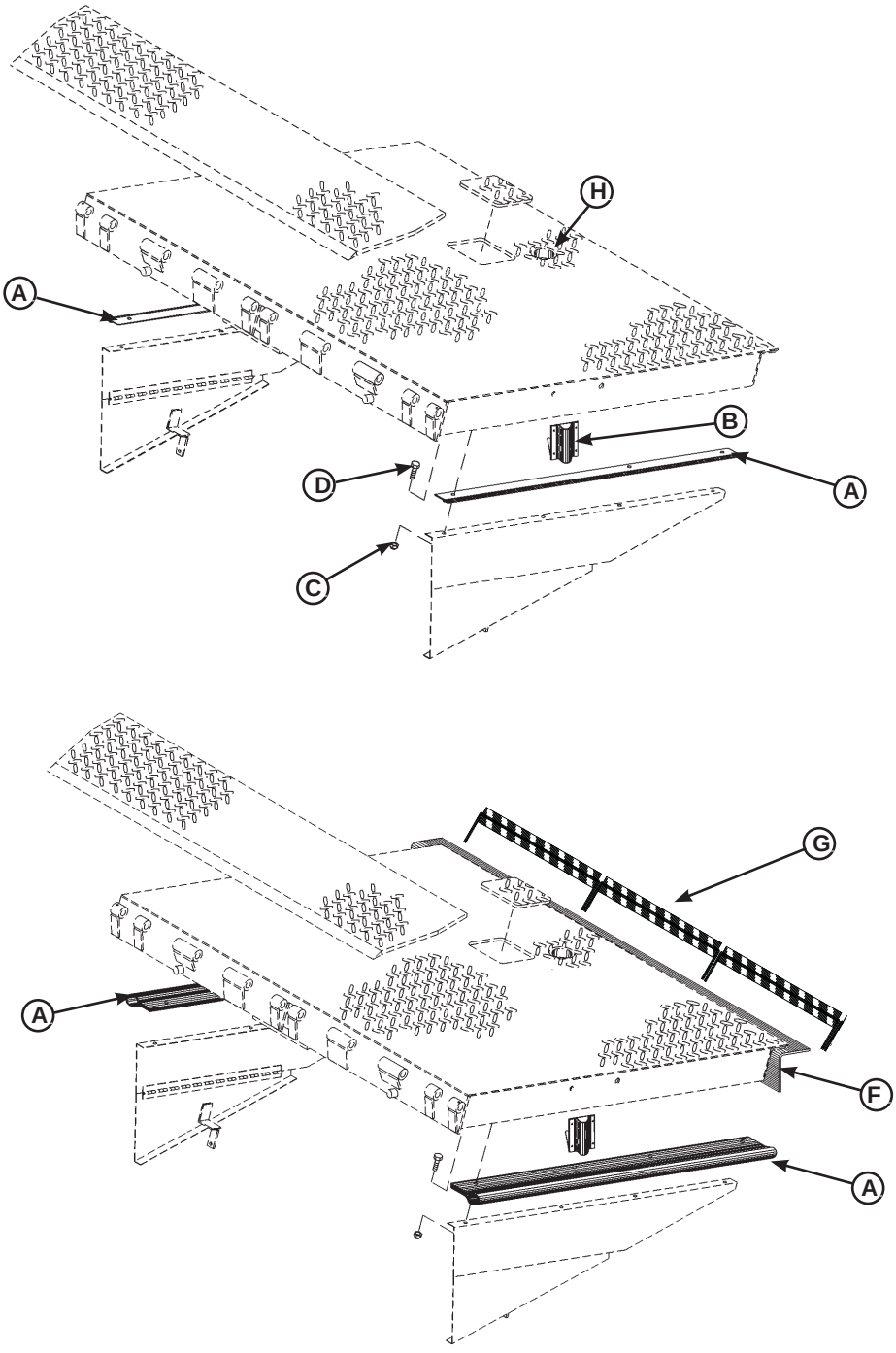
E Stop & Lip out KS5 and KS6


To Lip Cylinder from Logic Block
H
H
To Hoist Cylinder from logic Block
PSI Lip out valve to lip cylinder
Hoist cylinder
Return To Tank from Hook Block
E G F A
B
PSI from pump to Hook block
PSI to E stop
E Stop C D
Lip Out C D
Return E Stop To Hook Block
Pressure hose to Logic block

Item	Quantity	Part Number	Description
A	1	8583-0063	Valve Block E-Stop and Lip Out
B	1	4305-0263	Cable Harness (2 coils)
C	2	8581-0005	Cartridge Vale 3 Way (included when ordering 8583-0063)
D	2	8581-0004	Coil
E	2	2101-0077	Hex Head cap Screw
F	4	8581-0005	Washer Flat
G	2	2101-0039	Nylon Lock Nut, 5/16-18 UNC
H	AR	9904-0106	Hyd Hose,

* Provide dock leveler serial number and size of platform when calling or faxing orders.
** Provide hose lengths and fitting sizes

Weather Seal, Rubber Style



AR = As Required

NOTE: Kits are for existing dock leveler without weather seal.

* Provide dock leveler serial number and size of platform when calling or faxing orders.

Weather Seal, Brush Style

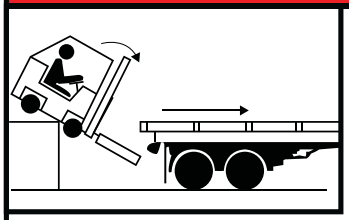
Item	Quantity	Part Number	Description
A	2	0191-0045	Brush Seal and Track, Left or Right 8’ Levelers 1” (25.4 mm)
	2	0192-____*	Brush Seal and Track, Left or Right Side, 1-1/2 in. 1” (25.4 mm)
	2	0191-0053	Rubber Seal, Left or Right Side, 8’ Levelers 1” (25.4 mm)
	2	0191-0054	Rubber Seal, Left or Right Side, 10’ or 12’ Levelers 1” (25.4 mm)
B	2	0193-0009	Neoprene Seal, Short Vertical, RH (6” Tall) UP To 55K
		0193-0010	Neoprene Seal, Short Vertical, LH (6” Tall) UP To 550K
	2	0193-0011	Neoprene Seal, Short Vertical, RH (8” Tall) 60K and above
		0193-0012	Neoprene Seal, Short Vertical, RH (8” Tall) 60K and above
C	AR	2101-0039	Nylon Lock Nut, 5/16-18 UNC (Side Weather Seal w/o Toe-Guard)
D	AR	2101-0011	Cap Screw, 5/16-18 UNC x 1 in. (Side Weather Seal w/o Toe-Guard)
F	2	0192-0052	W/S Rubber End Cap
G	1	Call	Rear Brush Weather Seal, One Size Fits All
H	1	0191-0056	Weather seal, Cup

* Provide dock leveler serial number and size of platform when calling or faxing orders.

AR = As Required

NOTES

DANGER



- Read and follow all instructions, warnings, and maintenance schedules in the manual and on placards.
- Operation and servicing of dock leveler is restricted to authorized personnel.
- Always chock transport vehicle wheels or engage vehicle restraint and set parking brakes before operating dock leveler or beginning to load or unload.
- Before activating dock leveler, ensure lip avoids contact with transport vehicle sides and cargo. If lip does not lower to transport vehicle bed, reposition transport vehicle.
- Ensure the transport vehicle floor supports extended lip or the leveler frame (lip keepers or below dock endload supports) supports the ramp before driving on ramp.
- Stay clear of hinges and front and sides of moving dock leveler.
- Never use hands or equipment to move the ramp or lip.
- Never use damaged or malfunctioning dock leveler. Report problems immediately to supervisor.
- Always store dock leveler and remove people, material, and equipment from ramp before vehicle leaves the dock.
- DO NOT ENTER PIT unless dock leveler is securely supported by the maintenance prop.
- Disconnect power and follow proper lockout/tagout procedures for the dock leveler before entering the dock leveler pit or doing any repair or inspection under the dock leveler.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DEATH OR OTHER SERIOUS INJURY.

Scan to view our owner's/user's manuals online.
www.**DockSystemsInc**.com

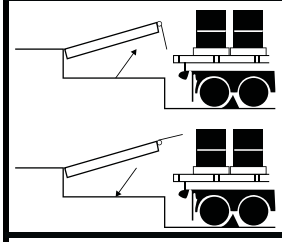
1.800.643.5424
Call for additional placards, or manuals, or with questions regarding proper use, maintenance, and repair of dock leveler.

POWERAMP MCGUIRE DLM
SYSTEMS, INC.
Loading Dock Equipment

1751-0874 Rev A

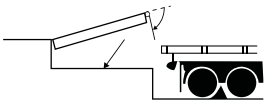
OPERATING INSTRUCTIONS

POWERED DOCK LEVELERS



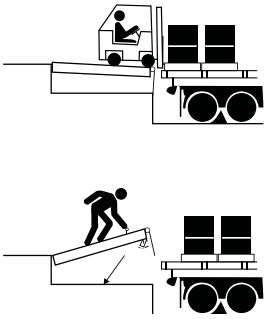
NORMAL OPERATION

1. Raise the platform by depressing and holding the RAISE button.
2. Hold the RAISE button until the lip is fully extended, then release the RAISE button. The platform will lower until lip is resting on the transport vehicle.



STORING LEVELER

1. Depress the RAISE button until the lip is completely folded. When the lip is folded, release the RAISE button. The platform will lower returning to the cross-traffic position.



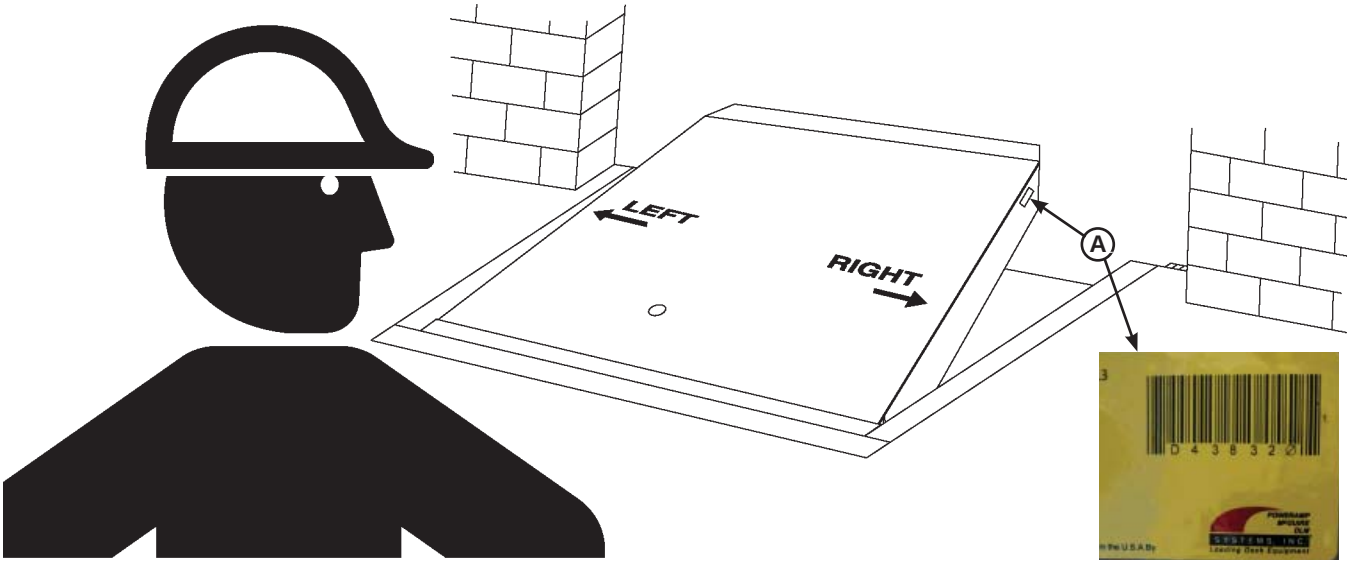
BELOW DOCK ENDLOADING

- **(HYDRAULIC ONLY)** Depress and hold the RAISE button until the leveler is fully raised. As the lip starts to extend, release the RAISE button. The leveler will lower to the below dock position provided the lip extension allows the lip to clear the lip keepers.
- **(AIR POWERED ONLY)** Depress and hold the RAISE button until the leveler is 12" above dock level. Pull the below dock level chain until the leveler passes the below dock position.
- **(HYDRAULIC WITH INFINITE LIP CONTROL)** If equipped, raise the platform by depressing and holding the RAISE button. When the lip is just above the lip keepers, simultaneously depress and hold the RAISE button and the LIP OUT button until lip has extended beyond the lip keepers. Release both buttons.

NOTE: If equipped, depressing E-STOP button will stop platform from lowering.

Item	Quantity	Part Number	Description
A	1	1751-0874	Placard

Customer Information



NOTE: Refer to illustration for left/right orientation of dock leveler.

The model/serial number decal (A) is located on the right platform joist near the front (lip) of dock leveler.

When you receive your XL dock leveler, write down the dock leveler model and serial number in the form provided. This will help ensure safe keeping of the numbers in the event the model/serial number decal (A) becomes lost or damaged.

Also, write down Systems, Inc.'s job number, the company that installed the dock leveler, and the original owner's name. This will all help to identify the specific dock leveler if more information is required.

When ordering, use part numbers and description to help identify the item ordered. Do not use "item" numbers. These are only for locating the position of the parts. Always give dock leveler MODEL NUMBER and/or SERIAL NUMBER.

For service, call or contact:

Systems, Inc.
P.O. Box 309
Germantown, WI 53022

Phone: (800) 643-5424
Fax: (262) 255-5917

Dock Leveler Information

Model _____

Serial No. _____

Systems, Inc., Job No. _____

Original Owner Information

Name _____

Address _____

_____

Installer Information

Name _____

Address _____

_____

Date of Installation _____

STANDARD PRODUCT WARRANTY

SYSTEMS, INC. warrants that its products will be free from defects in design, materials and workmanship for a period of one (1) year from the date of shipment. All claims for breach of this warranty must be made within 30 days after the defect is or can with reasonable care, be detected. In no event shall any claim be made more than 30 days after this warranty has expired. In order to be entitled to the benefits of this warranty, the product must have been properly installed, maintained and operated in accordance with all manufacturer's recommendations and/or specified design parameters and not otherwise have been subject to abuse, misuse, misapplication, acts of nature, overloading, unauthorized repair or modification, application in a corrosive environment or lack of maintenance. Periodic lubrication, adjustment and inspection in accordance with all manufacturers' recommendations are the sole responsibility of the Owner/User.

In the event of a defect, as determined by SYSTEMS INC., covered by this warranty, SYSTEMS INC. shall remedy such defect by repairing or replacing any defective equipment or parts, bearing the cost for the parts, labor and transportation. This shall be exclusive remedy for all claims whether based on contract, negligence or strict liability.

WARRANTY LIMITATIONS

THE ABOVE WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SYSTEMS INC. AND ITS SUBSIDIARIES SHALL NOT IN ANY EVENT BE LIABLE TO ANYONE, INCLUDING THIRD PARTIES, FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND INCLUDING BUT NOT LIMITED TO, BREACH OF WARRANTY, LOSS OF USE, LOSS OF PROFIT, INTERRUPTION OF BUSINESS OR LOSS OF GOODWILL.

PRODUCT SPECIFIC WARRANTY
"XL" SERIES LEVELER

In addition to the "Standard Product Warranty" provided with all Poweramp® Products, Systems Inc., guarantees materials, components and workmanship to be free of defects for the following extended periods:

- Standard Product Warranty is extended to two (2) years from date of shipment.
- Structural Warranty – For a period of seven (7) years from the date of shipment, this warranty specifically applies to; the deck section, lip section, frame, rear hinge assembly and front hinge assembly only.
- Hydraulic Warranty – For a period of seven (7) years from date of shipment, this warranty specifically applies to; the hydraulic pump and motor, all hydraulic cylinders, hydraulic pressure lines and fittings and fluid logic control assembly only.